# Pharmacy American Perfumer AND AROMATICS

COSMETICS
TOILETRIES
SOAPS
•
PHARMACEUTICALS
AEROSOLS
FLAVORING
& ADDITIVES
•
ESSENTIAL OILS

APRIL 1957

THE MAGAZINE OF TASTE AND SCENT

MAY 1 RECD

Citrus Oils . . . Page 27 • Manufacture of Soap . . . Page 53

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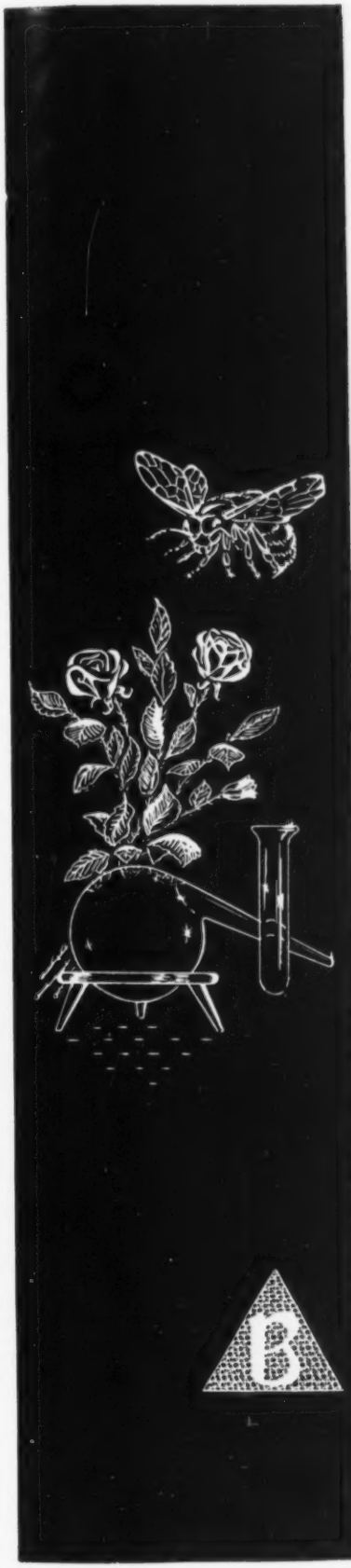

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APRIL 1957

American Perfumer AND AROMATICS



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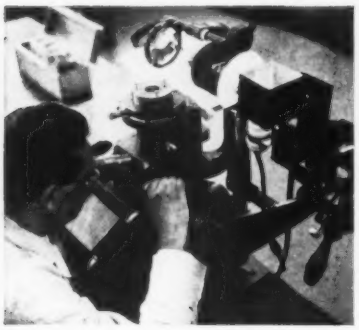

### Co-ordinated Research

*Pure research* into formulae and fabrication of glass, *packaging research* into processing and handling methods in customer plants, and *market research* into consumer attitudes, add up to greater specific value for your packaging dollar.

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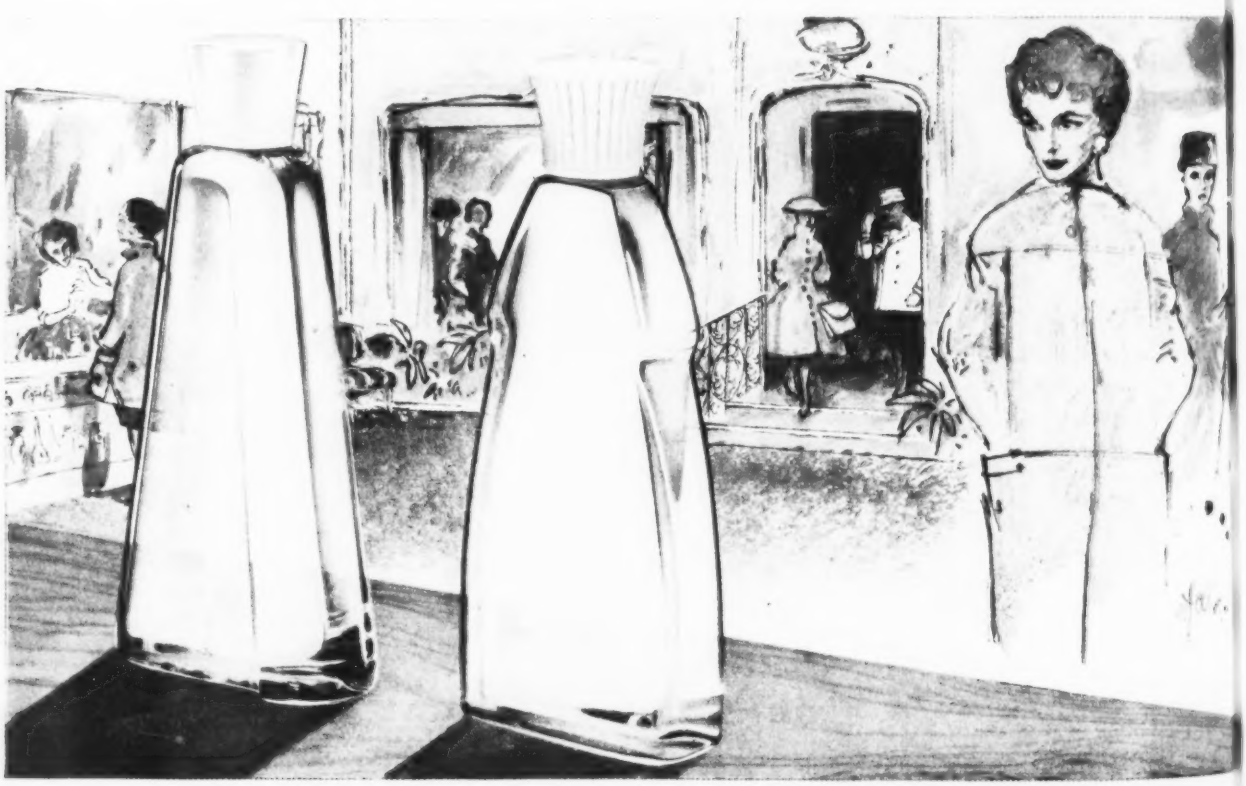

# COMPLETE PACKAGING APPROACH

**The Right Closure**

Know-how as to the best available liner and closure—best for packing, displaying, or using a specific product—may well be one of the most important single points through which expert packaging counsel will reward you many times over.

**Needed Fitments**

With emphasis on the word "needed," Owens-Illinois specialists are keenly aware of sales benefits possible through use of plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

**Merchandising Cartons**

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and retail warehouse as well as on your own filling line and in transit. Owens-Illinois is pioneering such developments.

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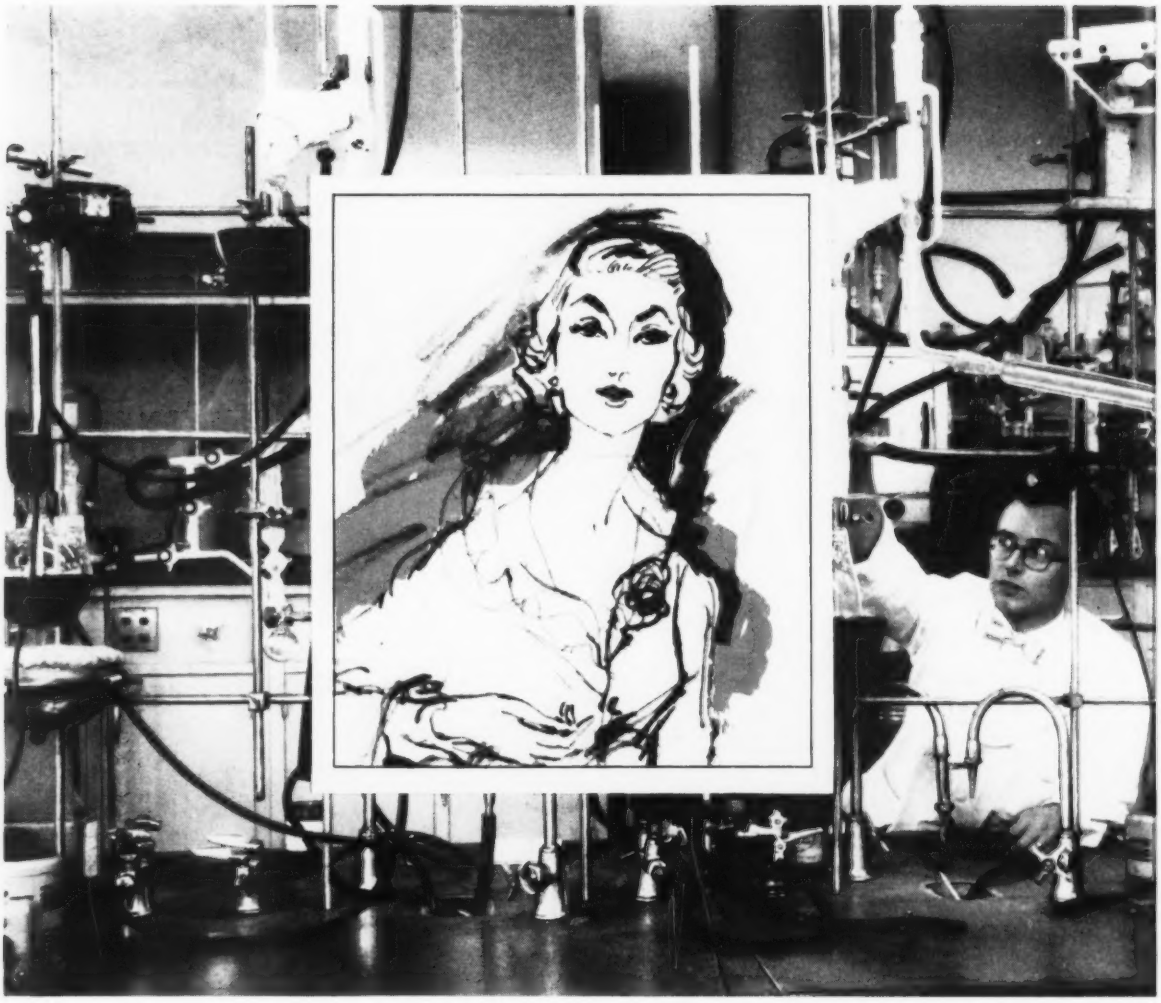

# This is a framework for *Flattery*

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# LAST MINUTE NEWS . . .

**Nobel laureate to Receive S.C.C. Special Award of $1,000**

Nobel laureate A. J. P. Martin and co-author P. T. James are to receive the Society of Cosmetic Chemists' annual special award for outstanding scientific literature. The prize of $1,000 will be presented jointly to the two distinguished English scientists at the meeting of the Society May 10 in the Hotel Commodore. The Society is honoring both for contributing an important tool to cosmetic science—gas-liquid chromatography.

**Hoffmann-LaRoche Establishes New Aromatics Division**

An Aromatics Division has been established by Hoffmann-LaRoche, Inc., Nutley, N. J. Philip Burnham will assume the position of sales manager of the division next month and Thomas Bush, younger son of Burton T. Bush, will serve as assistant sales manager.

**Financial Report of Pfizer in Sunday Supplements**

The colorful and skillfully prepared annual report to shareholders of Chas. Pfizer & Co. was inserted in its original form in the Sunday, March 31 issue of the New York Times and in the April 14 issues of the Chicago Tribune and Los Angeles Times. The report to its shareholders was designed to permit readers to learn at first hand how a very modern corporation reports to its stockholders. Feature articles were included in the report.

**Colgate-Palmolive Co. Loses Three Presidents in Four Years**

William Lee Sims II who resigned March 25 as president and director of Colgate-Palmolive Co. to devote his time to the operation of his citrus groves in Florida is the third president the company has lost in four years. John McConnell who was president in 1953 resigned in 1955. Prior to 1953 E. H. Little, chairman of the board, was president.

**Ladies' Night Featured in New York and Chicago by S.C.C.**

Ladies Night was celebrated by the Chicago Chapter of the Society of Cosmetic Chemists at Henrici's restaurant on the evening of April 9. A feature was a lecture "Charm in a Capsule" by Miss Ann Lee of the Patricia Stevens Finishing School. Miss Lee demonstrated how every woman can gain poise and confidence with proper posture, grooming, hair styling and wardrobe. Ladies Night this year will be celebrated by the New York Chapter of the S. C. C. at the Toots Shor restaurant April 24. The program is entirely social with entertainment and gifts for each lady. Bob Dunn, King Features Syndicate cartoonist and humorist will offer an additional treat to the members and guests who attend.

**Revlon Sales $85,700,000; Principals to Diversify**

The chief executives of Revlon Inc.—Charles Revson, Martin Revson and Dr. Charles H. Lackman—in order to diversify their investments and enlarge the public ownership of the company, have applied to the Security and Exchange Commission to issue 241,000 shares of common stock of which 179,020 will be used to recoup 15% of the grade B common shares held by the three chief executives. Data furnished in the prospectus submitted to the Commission indicated that sales of Revlon Inc. rose from $28,300,000 in 1953 to $85,700,000 in 1956. Expenditures rose from $4,689,190 to $15,503,079. Some interesting data on the cost of the $64,000 Question promotion was given in the propectus. The weekly cost was $70,783 for the show, the time and the prize money. At that rate the annual cost was around $3,680,416. The average prize money paid per broadcast was $15,300.

**T. G. A. Estimates Cosmetic Sales at $1,321,000,000**

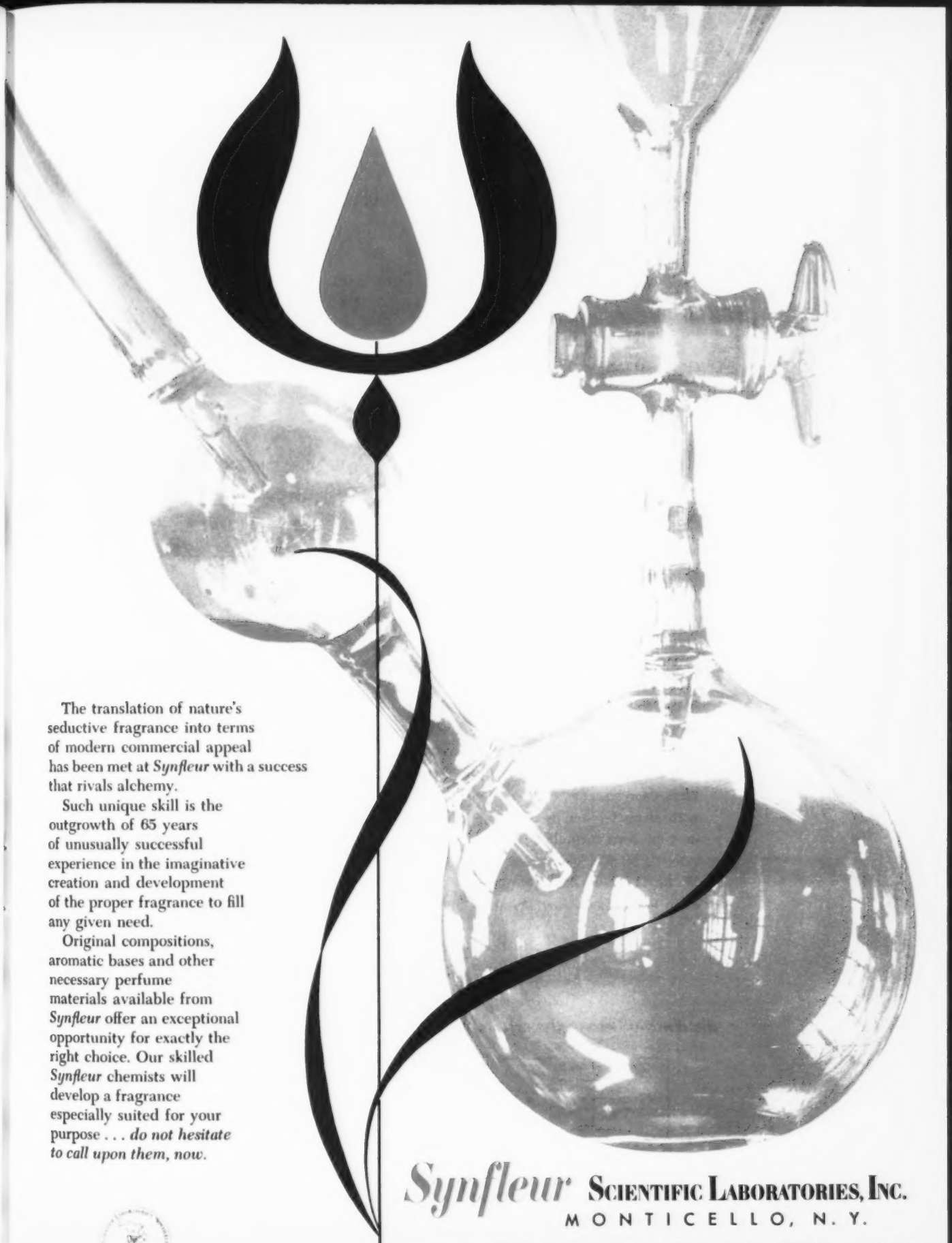
Total sales of perfumes, cosmetics and other toilet preparations, *excluding toilet soaps*, reached a new high record in 1956, according to computations by the Toilet Goods Assn. Retail sales for *1956* reached $1,321,000,000 which was an increase of approximately 10.8% over the total figure for *1955* which in itself was an all time high record. The increase extended pretty generally throughout the entire list of products but certain categories probably require comment. *Dentifrices* which normally show an annual gain of 5% showed an increase of 10.5% but the increase of sales of these products in food stores was greater than 16%. *Shaving preparations* showed an almost identical picture with respect to type of outlet with food store sales gaining substantially over those of other outlets. The total increase was about 9% with aerosol products accounting for by far the greater portion of this gain. Business in *make-up items* showed a gain of more than 14%, due principally to the impact of heavy promotion by leading companies in the field. The increase in *hair preparations* as a general class was less than during the last two or three years but was still a substantial 12.5%. Sales of *deodorants* increased by nearly 20% with the male market predominating in the rate of increase. Fragrance products as a whole lagged but did show a slight increase over 1955, all of which, however, was due to increased sales in colognes and toilet waters. Some individual houses showed a fairly sharp gain in perfume sales approximating the 10% shown by the industry as a whole but this pattern was very irregular and a considerable number of houses lagged far behind. Every type of outlet showed some gain in total sales but the gain in several categories was below the overall percentage of increase; in fact, only one classification of store showed an increase substantially above the national average and that was the food stores whose percentage moved up to 19.1% of the total or an increase of 18.5% above 1955. Independent and chain drug stores still lead as the largest outlet but their percentage declined slightly to 29.3%. The following table shows sales through the various types of outlets since 1950:

| | *Chain & Independent Drug Stores* | *Dept. Stores & Specialty Shops* | *Food Stores* | *House-to-House* | *Ltd. Price Variety Stores* | *All Other Outlets* |
|---|---|---|---|---|---|---|
| 1950 | 37.0% | 27.0% | 6.1% | 14.0% | 11.0% | 4.9% |
| 1951 | 36.0% | 25.5% | 8.5% | 16.2% | 10.0% | 3.8% |
| 1952 | 34.5% | 22.0% | 14.0% | 17.5% | 8.5% | 3.5% |
| 1953 | 32.0% | 22.1% | 15.5% | 18.3% | 8.4% | 3.7% |
| 1954 | 30.2% | 22.5% | 17.1% | 19.4% | 7.5% | 3.3% |
| 1955 | 29.4% | 22.3% | 17.9% | 20.0% | 7.3% | 3.1% |
| 1956 | 29.3% | 21.6% | 19.1% | 19.6% | 7.2% | 3.2% |

**Retail Sales of Cosmetics and Perfumes for 43 Years**

Perfume and cosmetic sales at retail as estimated by the Toilet Goods Assn. for each year beginning in 1914 to and including 1956 are as follows. The figures do not include toilet soaps.

| *YEAR* | *SALES* | *YEAR* | *SALES* |
|---|---|---|---|
| 1914 | $39,800,000 | 1935 | $322,100,000 |
| 1915 | 45,000,000 | 1936 | 336,500,000 |
| 1916 | 71,500,000 | 1937 | 374,000,000 |
| 1917 | 95,400,000 | 1938 | 412,300,000 |
| 1918 | 103,700,000 | 1939 | 425,100,000 |
| 1919 | 116,500,000 | 1940 | 449,900,000 |
| 1920 | 129,500,000 | 1941 | 463,600,000 |
| 1921 | 126,000,000 | 1942 | 481,400,000 |
| 1922 | 147,300,000 | 1943 | 507,500,000 |
| 1923 | 194,600,000 | 1944 | 593,000,000 |
| 1924 | 220,300,000 | 1945 | 711,300,000 |
| 1925 | 256,400,000 | 1946 | 758,200,000 |
| 1926 | 300,200,000 | 1947 | 743,800,000 |
| 1927 | 329,700,000 | 1948 | 749,800,000 |
| 1928 | 355,200,000 | 1949 | 770,800,000 |
| 1929 | 378,400,000 | 1950 | 840,100,000 |
| 1930 | 336,200,000 | 1951 | 912,800,000 |
| 1931 | 297,100,000 | 1952 | 1,004,000,000 |
| 1932 | 288,400,000 | 1953 | 1,020,800,000 |
| 1933 | 300,300,000 | 1954 | 1,086,800,000 |
| 1934 | 324,400,000 | 1955 | 1,192,200,000 |
| | | 1956 | 1,321,000,000 |



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Such unique skill is the outgrowth of 65 years of unusually successful experience in the imaginative creation and development of the proper fragrance to fill any given need.

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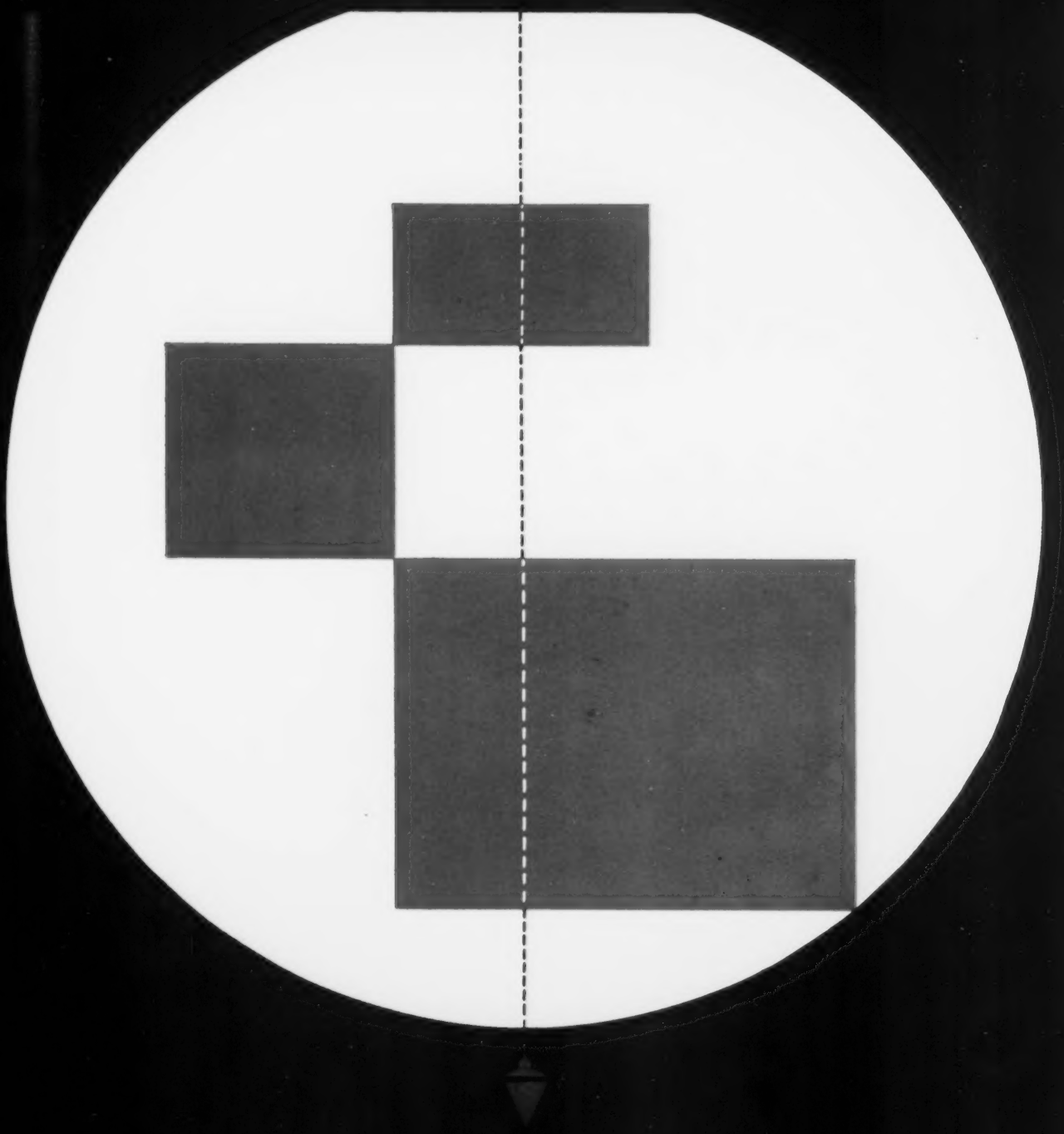

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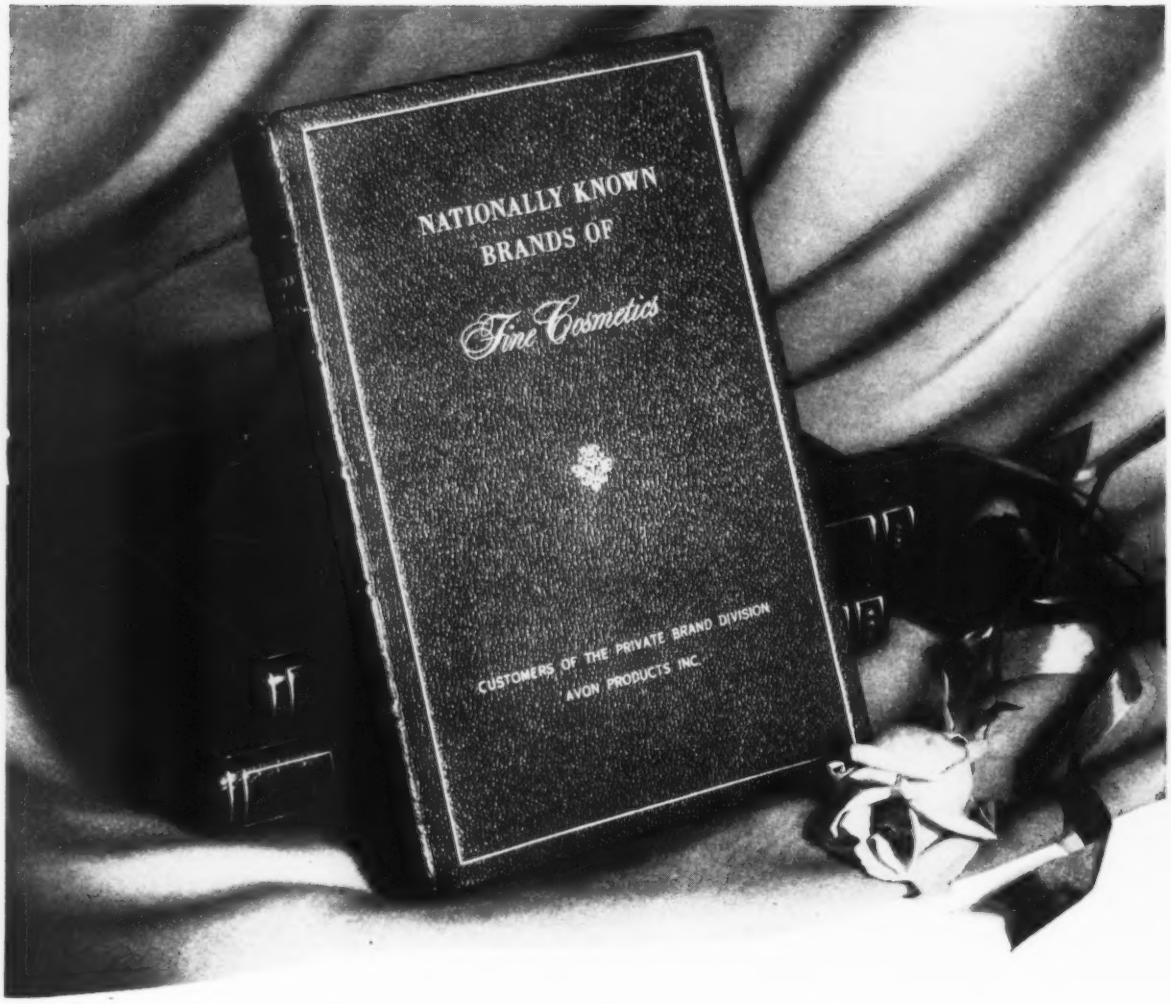


# It pays to go by the book!

Naturally, this book is a "closed" one. Names of the brands of fine cosmetics and toiletries made by the Private Brand Division of Avon Products are held in strict confidence.

But, we *can* say they're names of great renown . . . and their example is worth remembering.

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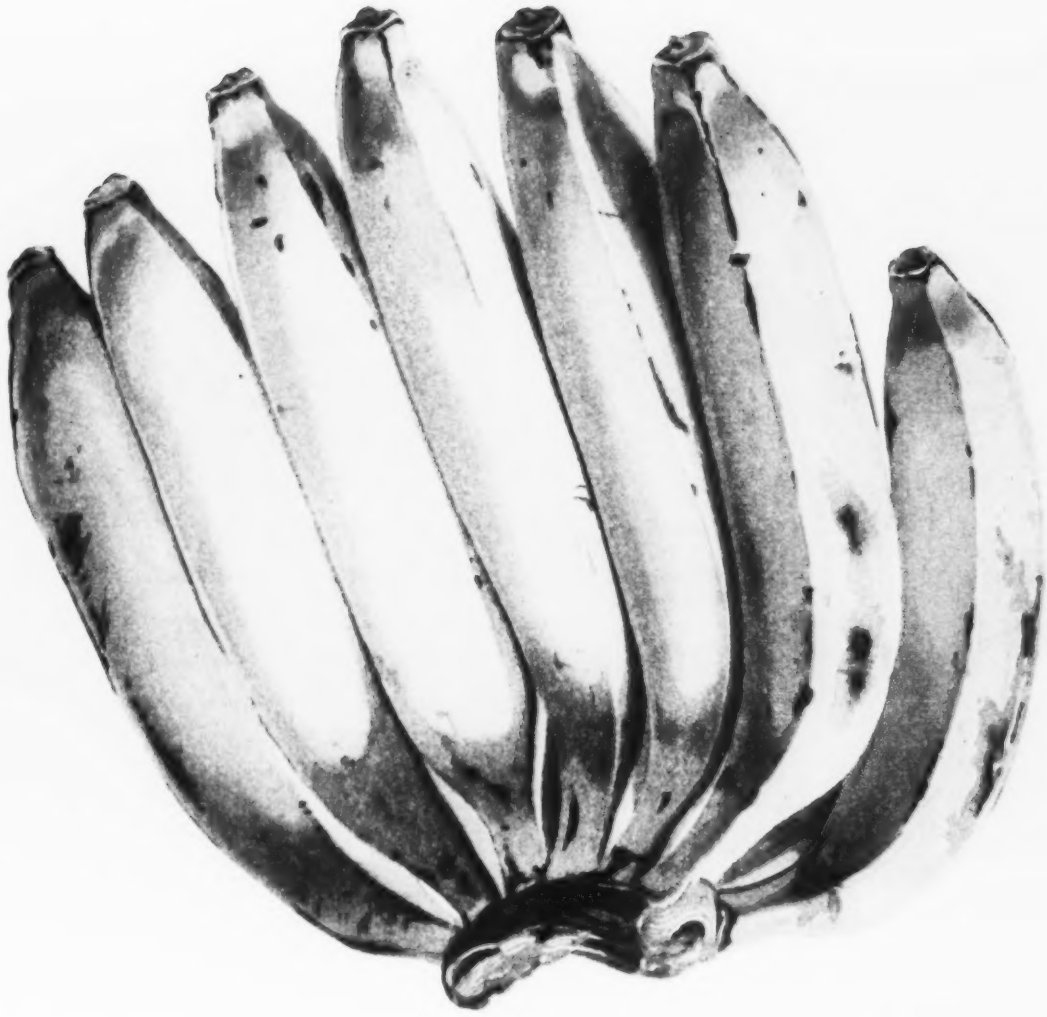

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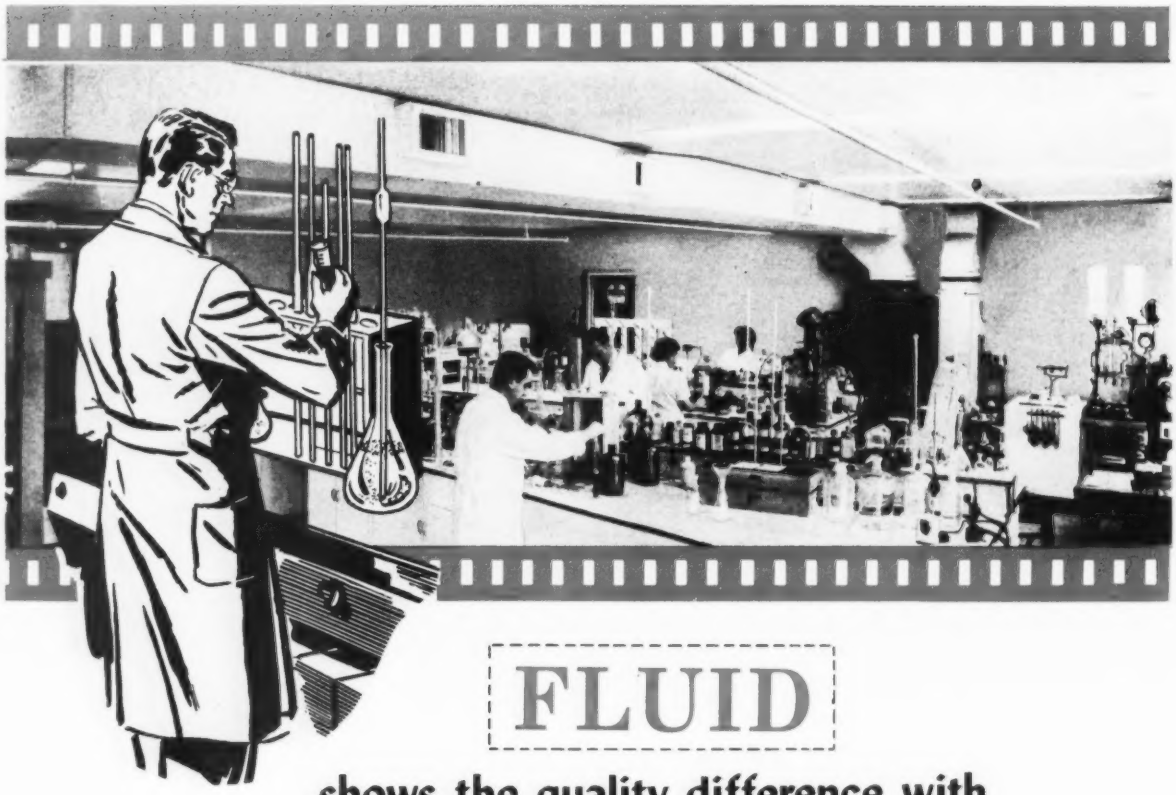

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# DESIDERATA

Maison G. deNavarre, F.A.I.C.

## Antibiotic Cosmetics

Speakers in New York City and Chicago in recent months have been pointing out the possibilities of adding antibiotics to cosmetics. Not arguing the pros or cons of the suggestions, it is important to note that first, antibiotics are chemicals, with active polar groups; second, as such, antibiotics have incompatibilities. Organic chemists aren't always on the ball when incompatibilities are being discussed because they are not always a straight forward organic (or inorganic) action.

Witness the publication of Hickey's (*Arch. Biochem. and Biophys.*, *46*, 331, 1953) paper in which he encountered an incompatibility or antagonism between some long chain unsaturated fatty acids as well as by a well-known ethoxylated fatty acid ester nonionic and the antifungal antibiotic ascosin.

There are a number of other references in the literature, some conflicting, that establish incompatibilities between antibiotics and ingredients of dermatological vehicles. Water, while detrimental to the stability of many antibiotic skin applications, does not affect them all. Nor is it an incompatibility in the chemical sense. It tends to produce breakdown products, probably as a result of traces of catalysts or enzymes which are water activated.

What is being mentioned here is antagonism due to other causes than water. Watch out for this!

## Gray Hair

It is pretty well established that there is no internal treatment, yet, that can restore the color to hair once gray, pantothenates, *p*-aminobenzoic acid and all of the vitamin B complex, notwithstanding. But it is not always appreciated by vendors or prospective manufacturers of "progressive metallic dyes" that they are not restoring color to hair. They are dyeing it. Furthermore, lead-sulfur coloring in particular, never seems to get down to the roots. For men this is important. The sideburns and neck area where hair is short, never gets the color, while the long ends are excessively dark.

An answer in the J. A. M. A., recently, to a doctor's query regarding hair coloring points up this group's feeling on hair coloring. Azo dyes though slower to give results are low in sensitivity. The "para" dyes are faster. Best results are from the hands of a professional operator rather than "do it yourself." The interesting thing about the answer is the modified A. M. A. attitude on hair colors as a group and the "para" type in particular, even though a last line reference is made to the fact that a careful operator will minimize untoward side effects.

## Cosmetics with Pollen

Imagination is not restricted to any one country. Royal jelly first, now pollen. Henri Luzuy gave a paper on this before the Second International Symposium in Paris last December. He points out the composition of pollen and interprets this interesting richness in vitamins as being something "super" for the skin. Why not a paté of fresh liver and orange juice? Or better yet, just a mixture of synthetic vitamins in the same concentration without the cost and the liabilities. Add to this traces of calcium, iron, potassium, silicon, phosphorus, sulfur and chlorine! Maybe some enzymes.

But why bother with pollen? Its extracts contain an allergen unless it is removed. Can you be sure that all the allergen is removed? If it is, doesn't the vitamin B complex suffer? Pollen is pretty expensive by the pound. Which pollen is best? Why?

For my part, a good B complex with or without enzymes and minerals has the pollen extract beat miles for uniformity, stability, price and safety.

## Notes

Welcome to Steffen Arctander—handsome Dane, explorer, writer, perfumer and conversationalist—may his home and life in the U. S. be happy. . . . Looks like Freddy Wells had a busy time during the Second International Symposium in

beauty of fragranc

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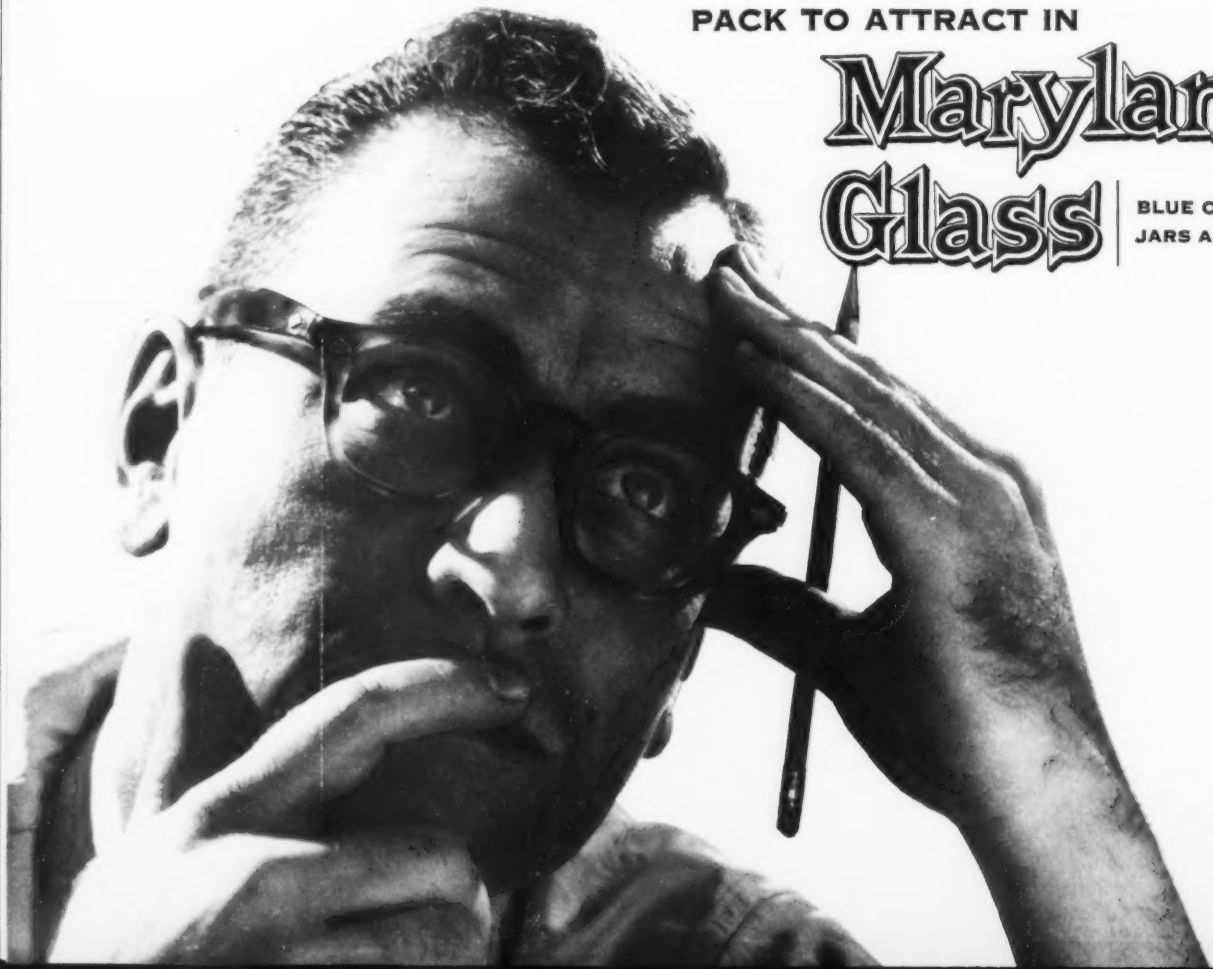

Paris recently—Hope he and Baron Langley do find a bottle of Chateau Chalon so we can enjoy it next July or August when a group of Yank Cosmetic Chemists (including me) invade Paris, Geneva and London in that order. . . . Congratulations to the Société Française de Cosmétologie and to contemporary Pierre Vélon who was one of two recipients of the Gattefossé Medal—May many more honors come to him. . . . Montavon's paper on biochemical properties of squalene as it appears in the February issue of INDUSTRIE DE LA PARFUMERIE is interesting. . . . The critiques on the sun tan testing running in PARFUMERIE U. KOSMETIK between Tronnier and Masch are very controversial. . . . Congratulations to Jack Pickthall and Editor Freddy Wells on the fine story and series of pictures on the explosion of aerosol bottles coated and uncoated in our British contemporary, SOAP, PERFUMERY AND COSMETICS. . . . The surge of sulfur containing dandruff shampoos has raised the dickens with stocks of colloidal sulfur. . . . Am told that there is a performance difference between sodium aluminum lactate complex and sodium aluminum chlorohydroxy lactate if aluminum content means anything. . . . A man asked me recently, "if you could have but one instrument in your laboratory for control work, what would you choose?"—that is a question—and it makes you think. What would your answer be? . . . Wonder just what are the five layers of skin that are penetrated and cleansed by a certain cleansing lotion being plugged on TV?

---

### No Typical Test Cities

"One of the abominations in this field is the concept of typical test cities. There is no typical test city."

Solomon Dutka, president, Audits & Surveys Co., made this assertion in a talk before the American Marketing Assn. on how to conduct test market research. He pointed out that the mere entrance of a new product into a so-called typical city immediately made it an atypical city. Further, he maintained, results of market research in "typical" test cities may be invalid because in these cities there is a tendency to heavy competition, both vertically and horizontally, between various products being tested.

The problem, Mr. Dutka said, "is not whether we are successful in test markets but how successful will we be when we go national."


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# QUESTIONS & ANSWERS

**1232: AMINES**

**Q.** *We would like you to recommend some amines that might be used in hand lotion instead of triethanolamine, the latter which has been claimed to sometimes cause dermatitis in combination with synthetic surfactants as per a Swedish dermatologist. Soaps of such amines (especially the stearate) should be harmless and not cause any skin irritation. Such amines would be preferable since they have been tested on the market in cosmetic creams and lotions. Furthermore, it would be preferable to have an amine in stearate form which would give the finished product a pearl lustre. We would like to have literature references in regard to the cosmetic use of such amines. A.M.B., Sweden.*

**A.** It is our understanding that dermatologists consider triethanolamine and soaps of this compound to be very mild in conjunction with their action on skin. In fact there are dermatological formulas appearing in the journals on dermatology which contain free triethanolamine. It is possible that surfactants of the type of triethanolamine lauryl sulfate may have a drying effect on skin. You can try one of the other alkanolamines, such as mono- or diethanolamine or the commercial mixed triisopropanol amine which is being made in the United States at this time.

**1233: POLYSOL**

**Q.** *We are interested in polysol. Please send us the name of the supplier as we wish a sample and complete information. F.H.J., California.*

**A.** The polysol idea has been developed by the Connecticut Chemicals Research Corp., 706 Bostwick Avenue, Bridgeport 5, Connecticut. Some information on this subject is attached. To our knowledge, if you want to use a polysol, you will have to contact Connecticut Chemicals Research Corp., and they may either do the work for you or license you to use their idea. The polysols are specialized propellents.

**1234: LOTION FORMULA**

**Q.** *Can you suggest an effective formula for a self-neutralizing and self-deodorizing waving lotion which will not conflict with any patent? A self-addressed, stamped envelope is enclosed for your convenience. K.M.B., Georgia.*

**A.** Your request is impossible to fulfill at this time. If it were possible, namely, to self-neutralize and self-deodorize a waving lotion for hair, you would have plenty that you could patent. Unfortunately, we do not have any suggestions that would not infringe on patents or that would do the job you require all at the same time.

**From time to time suggestions have been and will be made in this magazine with respect to processes, devices, materials, appliances, equipment and the like. It is not practicable for the writers and editors to have a patent search or examination made in connection with each such suggestion. Our readers are, therefore, requested and indeed urged to determine for themselves whether any patent or other right will be violated before acting on any such suggestion.**


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# *Examination of COLDPRESSED FLORIDA ORANGE TANGERINE GRAPEFRUIT AND PERSIAN LIME OIL in Ultraviolet*

CITRUS EXPERIMENT STATION, LAKE ALFRED, FLORIDA

Various chemical and physical procedures have been used to arrive at standards of identity for citrus oils. However, for the most part, organoleptic methods have been the final judge of quality. Since this procedure is strictly a matter of opinion, it leaves much to be desired as a method of analysis. It would be most desirable to have objective methods capable of giving both qualitative and quantitative results. While the examination of essential oils by ultraviolet (1,4,5) is not new, it does offer a criterion by which quality and purity may be measured. In anticipation that ultraviolet absorption data may eventually be used to supplement the present standards of purity, information is presented for the first time for coldpressed Florida orange, tangerine, grapefruit and Persian lime oil.

## METHODS

In this investigation, representative samples from large lots of oil were secured from plants utilizing the two methods previously described by Kesterson and Hendrickson (2) for the production of essential oils in Florida. The commercial samples used in this study were considered to be of excellent quality, as well as conforming to the standards of purity for each particular type oil.

Ultraviolet absorption data were secured in accordance with the procedure of Sale et al (4). A Beckman Model DU quartz spectrophotometer with hydrogen lamp attachment and a dilution of 0.25 gm. oil in 100 ml. of 95 percent ethanol was used. In evaluating the orange and tangerine oil samples, a 10 mm. silica-absorption cell was used. However, for grapefruit and Persian lime oil, the concentration was so great that it became necessary to use a 1 mm. silica-absorption cell in order to obtain a curve. Therefore, in order to compare the curves and data for coldpressed grapefruit and Persian lime oil with the data for coldpressed orange and tangerine oils, it is necessary to multiply by a factor of ten (10).

## EXPERIMENTAL PROCEDURE AND DISCUSSION OF RESULTS

COLDPRESSED ORANGE OIL.—Twenty-two samples of coldpressed orange oil were collected from 28,000 lb. lots of commercial orange oil. These samples were examined by ultraviolet and the results presented in Table 1. A typical curve for coldpressed orange oil is shown in Fig. 1. It can be seen from the ultraviolet absorption data in Table 1 that the CD values ranged from 0.25 to 0.39. The peak absorptions occurred at 330 mu with values from 0.42 to 0.68. Those samples of oil collected in December and January were produced from mixtures of Hamlin and Parson Brown fruit, whereas the February samples were produced from Pineapple oranges. The March and April samples were produced from mixtures of Pineapple and Valencia oranges, whereas the May and June samples were produced from Valencia oranges. It is interesting to note that the variety of fruit had no influence on the CD values or peak absorptions obtained. However, during June three samples gave peak absorptions at 329 mu instead of 330 mu. This difference is not great enough to appear significant.

In the course of this study, the opportunity presented

Table 1.- Spectrophotometer Analysis of Coldpressed Orange Oil in Ultraviolet.

| Date Sample Collected | CD | *Peak Absorption | Mu | Quantity Oil Lbs. |
|---|---|---|---|---|
| 12/29/55 | 0.30 | 0.52 | 330 | 28,000 |
| 12/29/55 | 0.29 | 0.49 | 330 | 28,000 |
| 1/9/56 | 0.26 | 0.43 | 330 | 28,000 |
| 1/16/56 | 0.25 | 0.42 | 330 | 28,000 |
| 1/16/56 | 0.27 | 0.44 | 330 | 28,000 |
| 1/31/56 | 0.32 | 0.52 | 330 | 28,000 |
| 2/2/56 | 0.27 | 0.46 | 330 | 28,000 |
| 2/2/56 | 0.33 | 0.57 | 330 | 28,000 |
| 2/2/56 | 0.39 | 0.68 | 330 | 28,000 |
| 2/27/56 | 0.30 | 0.50 | 330 | 28,000 |
| 3/13/56 | 0.28 | 0.47 | 330 | 28,000 |
| 4/6/56 | 0.31 | 0.51 | 330 | 28,000 |
| 4/6/56 | 0.33 | 0.55 | 330 | 28,000 |
| 5/18/56 | 0.30 | 0.50 | 330 | 28,000 |
| 5/18/56 | 0.30 | 0.50 | 330 | 28,000 |
| 5/18/56 | 0.30 | 0.50 | 330 | 28,000 |
| 5/18/56 | 0.29 | 0.49 | 330 | 28,000 |
| 6/16/56 | 0.29 | 0.49 | 329 | 28,000 |
| 6/16/56 | 0.29 | 0.48 | 330 | 28,000 |
| 6/16/56 | 0.29 | 0.49 | 329 | 28,000 |
| 6/16/56 | 0.29 | 0.49 | 329 | 28,000 |
| Maximum | 0.39 | 0.68 | 330 | - |
| Minimum | 0.25 | 0.42 | 329 | - |

*light path - 10 mm.

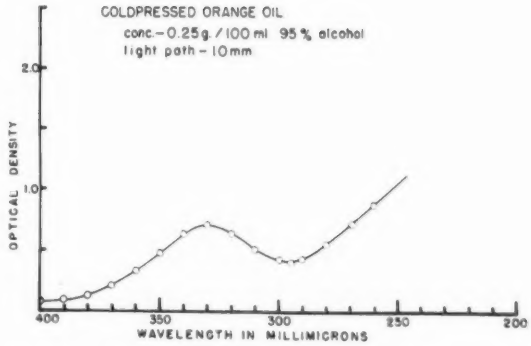



Fig. 1.—Ultraviolet absorption curve for coldpressed orange oil.

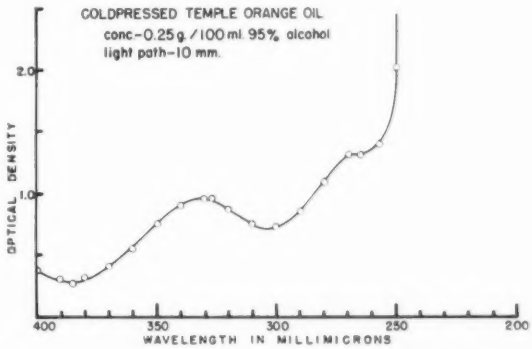



Fig. 2.—Ultraviolet absorption curve for coldpressed Temple orange oil.

itself to secure three samples of coldpressed orange oil made by the same process where the only variable was the different yield of oil obtained. Data relative to these oils are presented in Table 2. The factor previously found by Kesterson and Hendrickson (3) to influence the physical and chemical properties to the greatest extent was the yield of oil secured from the peel. Table 2 shows that as the yield increased, the values for specific gravity, evaporation residue, and refractive index also increased, but the values for optical rotation decreased. This is in accordance with previous findings. However, it is most interesting to note that as the yield increased, the values for peak absorption and CD also increased. Evidently, as the yield of oil is increased, more high boiling, high-molecular-weight constituents are extracted; the presence of a higher percentage of these compounds in the oil causes a reduction in the percentage of d-limonene, resulting in higher CD and peak absorption values.

The origin of the Temple orange, according to Webber and Batchelor (6), is unknown, but a very similar fruit has been reported as occurring in Jamaica. Its characteristics suggest that it is a hybrid of the tangerine with sweet orange. One sample of Temple orange oil was investigated by ultraviolet absorption as shown in Fig. 2. It can be seen from this curve that a peak absorption occurs at 327 mu which is intermediate between orange (330 mu) and tangerine (325 mu) oil. A second peak absorption occurs at 270 mu which is characteristic only for tangerine oil. This would indicate, as presupposed, that the Temple orange is a hybrid of the tangerine and sweet orange. This observation could have significance, in that it offers a possible method by which many unknown citrus hybrids could be identified.

Table 2.- Relation of Yield to the Ultraviolet Characteristics of Coldpressed Orange Oil.

| Yield lb. oil/ton peel | Specific Gravity 25°C/25°C | Refractive Index $N_D^{20}$ | Optical Rotation $\alpha_D^{25}$ | Evaporation Residue % | CD | Peak Absorption (330 mu) |
|---|---|---|---|---|---|---|
| 2.16 | 0.8430 | 1.4730 | +97.23 | 2.03 | 0.27 | 0.46 |
| 3.22 | 0.8435 | 1.4732 | +97.21 | 2.39 | 0.33 | 0.57 |
| 3.50 | 0.8438 | 1.4733 | +96.50 | 2.55 | 0.39 | 0.68 |

COLDPRESSED TANGERINE OIL.—Three lots of coldpressed Dancy tangerine oil were collected and analyzed over a period of three years, as shown in Table 3. A typical ultraviolet curve for tangerine oil is shown in Fig. 3. Peak absorptions occurred at 325 mu and 270 mu. Peak absorption values at 325 mu ranged from 1.05 to 1.28; whereas, at 270 mu they ranged from 1.27 to 1.43. At 325 mu. CD values ranged from 0.53 to 0.68, and at 270 mu from 0.20 to 0.24. Since these values were collected over a period of three years, they are considered to be approximately the normal range for tangerine oil.

Table 3.- Spectrophotometer Analysis of Coldpressed Tangerine Oil in Ultraviolet.

| Date Sample Collected | *325 mu | | *270 mu | | Quantity Oil Lbs. |
|---|---|---|---|---|---|
| | CD | Peak Absorption | CD | Peak Absorption | |
| 12/16/54 | 0.59 | 1.17 | 0.21 | 1.33 | 1,000 |
| 6/10/55 | 0.53 | 1.05 | 0.20 | 1.27 | 500 |
| 1/19/56 | 0.68 | 1.28 | 0.24 | 1.43 | 3,000 |

*light path - 10 mm.

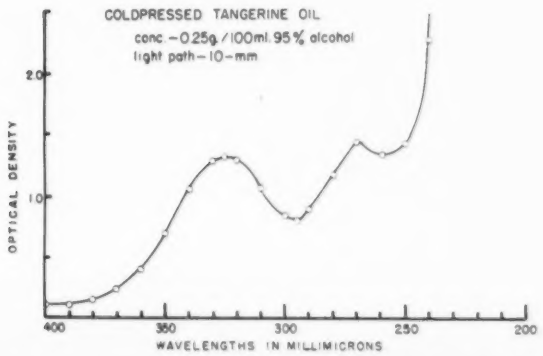



Fig. 3.—Ultraviolet absorption curve for coldpressed tangerine oil.

COLDPRESSSED GRAPEFRUIT OIL.—Three lots of commercial coldpressed Duncan grapefruit oil were analyzed by ultraviolet as shown in Table 4. A typical curve for coldpressed grapefruit oil is presented graphically in Fig. 4. The peak absorptions occurred at 319.5 to 320 mu with values from 0.317 to 0.365; whereas, the CD values ranged from 0.252 to 0.290. These particular values are considered to represent the approximate normal range in variation since they were collected during two different seasons.

Table 4.- Spectrophotometer Analysis of Coldpressed Grapefruit Oil in Ultraviolet.

| Date Sample Collected | CD | *Peak Absorption | Mu | Quantity Oil Lbs. |
|---|---|---|---|---|
| 1/7/55 | 0.253 | 0.322 | 320.0 | 28,000 |
| 4/7/55 | 0.252 | 0.317 | 320.0 | 28,000 |
| 4/18/56 | 0.290 | 0.365 | 319.5 | 4,000 |

*light path - 1 mm.

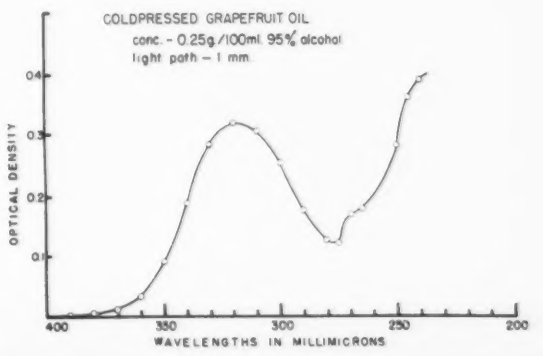



Fig. 4.—Ultraviolet absorption curve for coldpressed grapefruit oil.

COLDPRESSSED PERSIAN LIME OIL.—Two lots of coldpressed Persian lime oil were analyzed by ultraviolet as shown in Table 5. A typical curve for coldpressed Persian lime oil is shown in Fig. 5. Peak absorptions occurred at 320 mu with values of 1.37 and 1.59 with CD values of 1.09 and 1.23, respectively.

Table 5.- Spectrophotometer Analysis of Coldpressed Persian Lime Oil in Ultraviolet.

| Date Sample Collected | CD | *Peak Absorption | Mu | Quantity Oil Lbs. |
|---|---|---|---|---|
| 11/15/54 | 1.09 | 1.37 | 320 | 2500 |
| 1/23/56 | 1.23 | 1.59 | 320 | 2500 |

*light path - 1 mm.

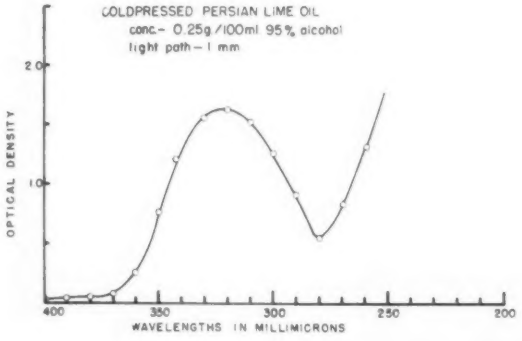



Fig. 5.—Ultraviolet absorption curve for coldpressed Persian lime oil.

Table 6.- Detection of Adulteration of Coldpressed Orange Oil with Double Distilled d-Limonene.

| Coldpressed Orange Oil % | d-Limonene % | CD | *Peak Absorption (330 mu) |
|---|---|---|---|
| 100 | 0 | 0.303 | 0.535 |
| 75 | 25 | 0.222 | 0.385 |
| 50 | 50 | 0.155 | 0.260 |
| 25 | 75 | 0.079 | 0.155 |
| 0 | 100 | 0.000 | 0.020 |

*light path - 10 mm.

ADULTERATION and ADMIXTURES of COLDPRESSED CITRUS OILS.—Since some of the coldpressed citrus oils are considerably more valuable than double distilled d-limonene derived from citrus, it is conceivable that the latter product could possibly be used as an adulterant when certain price considerations are involved. It is possible to have adulterated citrus oils with physical and chemical constants well within those for genuine oils. However, ultraviolet absorption values possibly would show these oils to be adulterated. Consequently, both the ultraviolet absorption and physical and chemical characteristics should be considered before the sample is judged to be impure.

Table 7.- Detection of Adulteration of Coldpressed Tangerine Oil with Double Distilled d-Limonene.

| Coldpressed Tangerine Oil % | d-Limonene % | *325 mu | | *270 mu | |
|---|---|---|---|---|---|
| | | CD | Peak Absorption | CD | Peak Absorption |
| 100 | 0 | 0.59 | 1.17 | 0.21 | 1.33 |
| 75 | 25 | 0.44 | 0.89 | 0.15 | 1.04 |
| 50 | 50 | 0.29 | 0.60 | 0.09 | 0.74 |
| 25 | 75 | 0.14 | 0.32 | 0.02 | 0.45 |
| 0 | 100 | 0.00 | 0.03 | 0.00 | 0.20 |

*light path - 10 mm.

Table 8.- Detection of Adulteration of Coldpressed Grapefruit Oil with Double Distilled d-Limonene.

| Coldpressed Grapefruit Oil % | d-Limonene % | CD | *Peak Absorption (320 mu) |
|---|---|---|---|
| 100 | 0 | 0.253 | 0.322 |
| 75 | 25 | 0.146 | 0.195 |
| 50 | 50 | 0.119 | 0.165 |
| 25 | 75 | 0.059 | 0.090 |
| 0 | 100 | 0.000 | 0.028 |

*light path - 1 mm.

Table 9.- Detection of Adulteration of Coldpressed Persian Lime Oil with Double Distilled d-Limonene.

| Coldpressed Persian Lime Oil % | d-Limonene % | CD | *Peak Absorption (320 mu) |
|---|---|---|---|
| 100 | 0 | 1.09 | 1.37 |
| 75 | 25 | 0.64 | 0.81 |
| 50 | 50 | 0.44 | 0.56 |
| 25 | 75 | 0.22 | 0.29 |
| 0 | 100 | 0.00 | 0.03 |

*light path - 1 mm.

The peak absorption wavelengths and CD values for coldpressed orange, tangerine, grapefruit and Persian lime oils adulterated with double distilled d-limonene are shown in Tables 6, 7, 8 and 9, respectively. In Fig. 6 the ultraviolet absorption curves to detect the admixture of coldpressed orange oil with double distilled d-limonene are presented. These particular curves are characteristic and are used to illustrate what would occur if cold-pressed tangerine, grapefruit or Persian lime oil were adulterated in similar fashion.

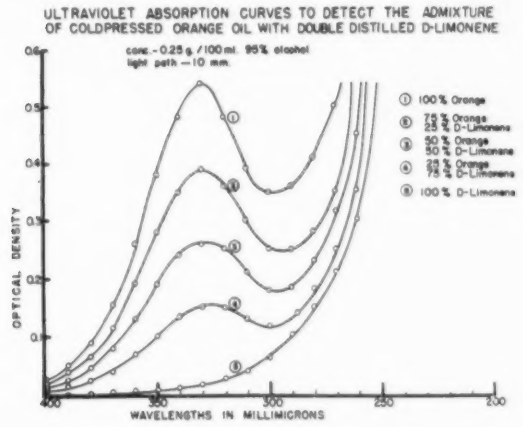

ULTRAVIOLET ABSORPTION CURVES TO DETECT THE ADMIXTURE OF COLDPRESSED ORANGE OIL WITH DOUBLE DISTILLED D-LIMONENE
conc. - 0.25 g. / 100 ml. 95% alcohol
light path - 10 mm.
① 100% Orange
② 75% Orange 25% D-Limonene
③ 50% Orange 50% D-Limonene
④ 25% Orange 75% D-Limonene
⑤ 100% D-Limonene
OPTICAL DENSITY
WAVELENGTHS IN MILLIMICRONS

**Fig. 6.—Ultraviolet absorption curves to detect the admixture of coldpressed orange oil with double distilled d-limonene.**

The data presented for Temple orange oil can be used as an example to illustrate what might be expected by the admixture of coldpressed tangerine oil with coldpressed orange oil. The addition of orange oil depresses the CD value at 270 mu and shifts the peak from 325 mu for tangerine oil toward 330 mu, the peak for orange oil. The converse is true for the addition of tangerine oil to orange oil.

By the use of ultraviolet absorption, it is possible to determine if grapefruit oil has been adulterated with orange oil. In Fig. 7 the ultraviolet curves show the effect of the admixture of grapefruit and orange oil. It can be seen from this curve that a small addition of orange oil depresses the CD and peak absorption value, and shifts the peak from 320 mu for grapefruit oil toward 330 mu, the peak for orange oil. The converse is true for the addition of grapefruit oil to orange oil. Any grapefruit oil that shows a shift in the peak absorption value away from 320 mu, as well as giving a peak absorption and CD value lower than the established minimum for pure grapefruit oil, is probably adulterated.

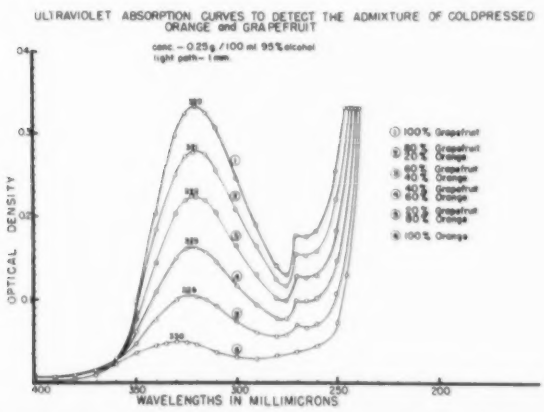

ULTRAVIOLET ABSORPTION CURVES TO DETECT THE ADMIXTURE OF COLDPRESSED ORANGE and GRAPEFRUIT
conc. - 0.25 g. / 100 ml. 95% alcohol
light path - 1 mm.
① 100% Grapefruit
⑥ 100% Orange
OPTICAL DENSITY
WAVELENGTHS IN MILLIMICRONS

**Fig. 7.—Ultraviolet absorption curves to detect the admixture of coldpressed grapefruit and orange oil.**

Physical, chemical and ultraviolet methods show no change between freshly expressed and aged grapefruit oil. However, freshly expressed oil in most instances has been judged by essential oil houses to have an orange by-note. This particular factor has made the oil unsuitable for use as a good quality grapefruit oil. When the oil has been stored properly for one year and resubmitted to the same essential oil house for evaluation, it has been judged to be of excellent quality. It thus becomes apparent that it is necessary to age grapefruit oil properly for one year in order to obtain the flavor and aroma desired by the essential oil industry.

Coldpressed Persian lime oil can be used to sophisticate coldpressed lemon oil if no more than ten percent is used. A California type lemon oil can be converted into an Italian type by the addition of ten percent Persian lime oil. Such samples have been submitted to essential oil houses and they have been judged to be good quality lemon oil. The ultra-violet absorption curves give a much greater peak absorption and CD value for the admixture than for pure California lemon oil. However, if the ultraviolet curve is made very carefully, a shift from 315 mu to 316-317 mu may be noted for the peak absorption value, thus indicating adulteration.

The method of handling fruit in Florida has become so efficient and well mechanized that it is almost impossible to produce an essential oil from mixed peel. However, the same result can be obtained by the admixture of the pure essential oils themselves. Consequently, if such an oil is encountered in commerce it is most probably the result of blending.

## SUMMARY

Ultraviolet absorption data is presented for Florida coldpressed orange, tangerine, grapefruit and Persian lime oil to show that each particular oil gives a characteristic absorption curve. It is possible to use such information as a criterion to identify the oil and possibly supplement the present standards of purity.

The yield of coldpressed oil obtained from oranges was shown to have an influence on the ultraviolet absorption characteristics of the oil. Different varieties of oranges were shown to have no influence on the CD values or peak absorptions obtained.

Temple orange oil was used to illustrate how ultraviolet absorption techniques could possibly be used as a method to identify unknown citrus hybrids, as well as detect the admixture of tangerine and orange oil.

Ultraviolet absorption curves can be used to identify pure grapefruit oil, as well as admixtures of grapefruit and orange oil. Also, information is presented to show how the adulteration of citrus oils with double distilled d-limeonene may be detected.

### LITERATURE CITED

1. Dijkstra, K. Onderzoek von Fenige Altherische Olien Door Absorptieming in HetUltraviolet. Pharmac. Wubl. 73: 502-516. 1936.
2. Kesterson, J. W. and R. Hendrickson. Two Commercial Methods for the Production of Citrus Oils in Florida. Amer. Perf. and Aromatics 67: 2: 35-38. 1956.
3. Kesterson, J. W. and R. Hendrickson. Essential Oils from Florida Citrus. Univ. of Fla. Agr. Sta. Tech. Bul. 521: 1-70. 1953.
4. Sale, J. W. et al. Analysis of Lemon Oil. Jour. Assoc. Offic. Agr. Chemists 36: 1: 112-119. 1953.
5. Van Os, D. and K. Dijkstra. L'Examen des hiles essentielles par la meosure de l'absorption dous l'ultra-violet. J. Pharmac. Chimie 25: 437-454. 1937.
6. Webber, J. H. and L. D. Batchelor. The Citrus Industry. Vol. I. Univ. of Calif. Press. 1948.

# *PACKAGE DESIGNER'S COUNCIL 1956* AWARDS

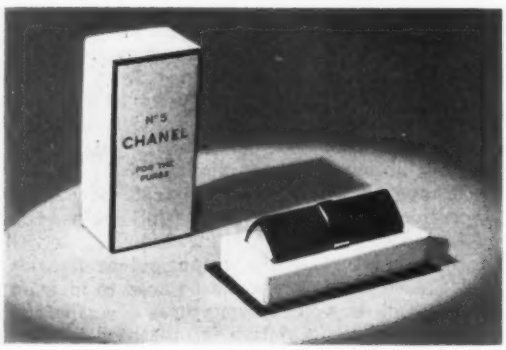
## Presenting a Cross-Section of Winning Designs

### DONALD DESKEY ASSOCIATES

Ice Blue Aqua Velva After Shave Lotion packages, a Donald Deskey Associates design, was awarded the best-in-show Gold Medal by the Package Designer's Council 1956 Competition, in addition to receiving first prizes in the personal products and redesign categories. Cartons are supplied by Container Corp. of America and Forbes Co., bottle and cap by Owens-Illinois Glass Co., the label by the Foxon Label Co.

### CHARLES MAGERS

Charles Magers, designer of Ortho Delfin tube, received one of two $500 Awards made available by the Collapsible Tube Manufacturers' Council. The tube is manufactured by the White Metal Mfg. Co. and the Sheffield Tube Corp.




### JEAN HELLEU

The best designed package in the cosmetics category of this year's Package Designer's Council Competition is this Chanel "For the Purse," by Jean Helleu. The attractive box, with its black and white motif, is supplied by the Walter Jamieson Corp., while the case is by Scovill Mfg. Co., the bottle by Carr-Lowrey Glass Co., the cap by Armstrong Cork Co., and the box by E. J. Trum.

### GERALD STAHL ASSOCIATES

Gerald Stahl Associates' design of this Lubriplate tube took a $500 Industry Award in the PDC competition. The tubes are made for Fiske Bros. by Aluminum Co. of America and White Metal Mfg. Co.

### CHARLES MAGERS

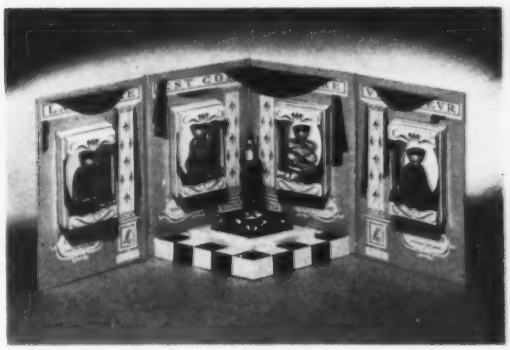
This J. R. Watkins Cologne Trio Gift Package, without brand names to encourage its use as an unwrapped gift, won its designer, Charles Magers, a certificate of merit. The box is made by J. R. Watkins, S. D. Warren, and Interchemical Corp.

### ROBERT SIDNEY DICKENS AND KENJI YOSHIZUMI

Robert Sidney Dickens and Kenji Yoshizumi received a PDC certificate of merit for their design of Dial Shampoo and Soap packages for Armour & Co. The package manufacturers are National Paper Box Co., Owens Illinois Glass, and Plax Corp.

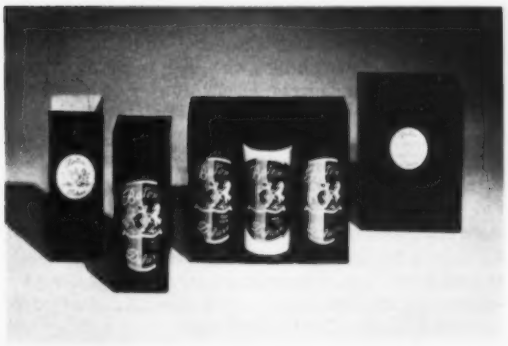
### BOB GILL

A certificate of merit went to Bob Gill for his design of A La Carter packages, made by Murray Hill Label Co., Inc.



### JOHN ALLEN

This John Allen design of Lucien Lelong Galerie des Parfums earned him a PDC certificate of merit. Suppliers are J. Landowne, Chaspec Mfg., Emet Plastics, Shaw-Randall, Lord Baltimore Press, Schlegel Litho., Kimble Glass, and Colt Mfg. Co.



### JEROME H. MICHELL

Sears, Roebuck & Co.'s Baton Deluxe men's toiletries won an honorable mention for its designer, Jerome H. Michell. Walter Frank Organization and Donrico are the suppliers.

Dr. H. Gregory Thomas receives the award of honorary membership from President Pierre L. Bouillette

# *PERFUMERS HONOR DR. H. GREGORY THOMAS*

Justly deserved tribute was paid to the talented Dr. H. Gregory Thomas, president of Chanel Inc. and one of the leaders of the industry, by the American Society of Perfumers when it conferred on him honorary membership in the Society at its third annual symposium in the Essex House, New York, March 20.

In conferring the honor on Dr. Thomas, the president of the association, Pierre Bouillette pointed out that Dr. Thomas is known nationally and internationally in law, in diplomacy, in world politics and in economics as well as in business and social circles.

Dr. Thomas was educated in England, France, Spain and Switzerland. He took his Master of Arts degree from Cambridge University, England, and received the degree of Doctorate in Laws from the University of Paris, France, and later received the Diploma of Higher International Studies from the same institution. Subsequently the degree of Doctor of Laws was conferred on him by the university in Salamanca, Spain.

On the international scene Dr. Thomas serves as a member of the executive committee of the important Free Europe Committee Inc. and is vice president of its Portuguese subsidiary, Raret. In addition Dr. Thomas is vice president of the French Chamber of Commerce in the United States, Inc. and at the last meeting of the Chamber he was awarded the Cross of Chevalier of the Legion of Honor by the Consul General of France in recognition of his eminent services to the cause of Franco-American economic and cultural interests. Dr. Thomas practiced international law with offices in Paris and The Hague and was later legal advisor to one of the South American governments at the League of Nations. During the last war he served in the office of Strategic Services and later was economic counselor of the American Embassy in Madrid, Spain, and special assistant to the American ambassador to Portugal.

**Chairman Dr. Paul G. I. Lauffer welcomes the record attendance of members and guests to the third annual Symposium. Speakers on the rostrum from left to right were: Dr. Amos Turk, Harry C. Saunders, Dr. H. Gregory Thomas, President Pierre Bouillette, Dr. Paul Lauffer, Camille H. Bourquet, Dr. Paul Z. Bedoukian, Dr. Ernst T. Theimer and Harold Goulden. Points brought out in the papers were discussed afterwards.**

On the American scene Dr. Thomas has served the industry in various important executive capacities. He came into the trade as vice president and general manager of Guerlain Inc. in 1934. He then became director of the Board of Standards of the Toilet Goods Assn. and later that association elected him an honorary member. Subsequently he served as president of the Fragrance Foundation and for over 20 years has been a member of the Perfumery Importers Assn.

In addition to his other numerous activities Dr. Thomas is a Commander of the Order of Tastevins and Grand Master of the Commandery of the Bon Temps du Medoc. All of the foregoing activities were pointed out by President Pierre Bouillette in his introduction with his usual skill and flashes of humor. Turning to Dr. Thomas Mr. Bouillette then said:

"For your eminent activities in the perfume industry at large which is served by your executive ability, your knowledge of its problems, your vision of the future. . . For your interest in the protection of its traditions, its ethics, its standards. . . For your forceful participation in the establishment and development of sound business relations. . . . For your sensitive appreciation of the arts and your eloquent expression of it, which includes perfumes and their role in modern society. . . For your comprehension of and contribution to the human side of such activities with charm, wit and enthusiasm. . . And because you have put fragrance in your oratory and your oratory at the service of fragrance, I have the duty, the privilege and the pleasure to present you with a Certificate of Honorary Membership in the American Society of Perfumers." After the hearty applause from the large audience which followed the presentation had subsided, Dr. Thomas gracefully expressed his thanks to the Society.

## What's Ahead in Fragrance?

The theme of the symposium was "What's Ahead in Fragrance" and an outstanding program of six speakers, all specialists in the industry, served to make it an unusually interesting and vital meeting. Dr. Paul G. I. Lauffer, whose profound, practical and theoretical knowledge of perfumes and cosmetics is well known throughout the industry, was chairman of the Symposium Committee and was ably assisted by Pierre Bouillette, Camille H. Bourguet, Everett D. Kilmer, Dr. Oliver L. Marton, Raoul Pantaleoni and Christian F. Wight.

Following the reading of the papers Harold Goulden, director of the Board of Standards of the Toilet Goods Assn. and various members discussed them. One of the interesting questions asked Mr. Thomas was that posed by Miss Hazel Bishop who asked him to define quality in a perfume. Mr. Thomas answered that a perfume has real quality when it is a compound of the finest materials created by an artist in such a manner that it will be a beautiful composition that enjoys success in the market. A sumptuous banquet followed.

Abstracts of the papers presented, which will later be published in full by the Society, follow.

### Fragrance Types and Merchandising Methods

**H. Gregory Thomas**

**President, Chanel, Inc.**

First I wish to pay a sincere tribute to all those who create the products we sell. Without your formulations there would be no perfume industry. At the same time you must all be painfully aware of the business reality that even the best formulated product meets with no consumer response unless it is properly named, attractively packaged and constructively merchandised. Your role is an essential one but one which can only be brought to fruition with the help of the package designer, the advertising executive and the salesman.

It is my firm belief that there are no recognisable trends in fragrance in the same sense as we note trends in fashion. All of you know that there cannot be a meeting of creative minds to determine that in the Spring of 1958 the perfume industry will popularize floral bouquets. True, there has been an increasing demand for stronger, heavier scents but only because the consuming public imagines these to be more lasting and therefore better value for the money in the minds of those who are incapable of appreciating the refinements of a great perfume creation.

The discrimination of the consumer in seeking real quality in a perfume has not been developed sufficiently in this market. Women are still too prone to select a perfume because it is expensive, because John gave it to her after a first date, or because Mary, the social leader of the community wore it at the Country Club dance. With the growth of the appreciation for taste in many fields this barrier to the expansion of our industry is

**A part of the large number of members and guests at the banquet following the informative and interest-**

being overcome. . . . As in music, each perfume may have as many different meanings to any user as music may have to any listener. The stimulating response to such evanescent substances I call internal because they require intimate, personal interpretation to be enjoyed fully. I consider the sentient reaction to a perfume the important characteristic of the perfume. The perfume liquid itself has no more importance than the sheet of unplayed music or the bottle of fine claret that is neither opened, poured nor tasted.

With regard to perfume merchandising we are interested in the developing sales of products which have not expanded as quickly as some other items in the cosmetic field such as lipsticks and hair preparations. This is probably due to the difficulty which all of us in our branch of the industry find in advertising the advantages of our products when they are non visual in their effects.

The average perfume manufacturer finds himself hampered by the prevalent demonstration system in the finer stores, where the salesgirl behind the counter can more easily build her daily sales' report on creams, powders, bath preparations and products for the grooming of the hair. The inherent vice of the PM and demonstrator system is so deeply a part of our distribution pattern that I could tell you of one very large store where a conspiracy of demonstrators prevented a single bottle of a leading perfume from being placed on sale on the day before Christmas and where the same store, immediately following Christmas, was constrained to return to the manufacturer an overstock of unsold merchandise in this fragrance.

These boycotting practices have pushed perfumers, whose products enjoy great popular demand, to seek new outlets where they will not be subjected to salesgirl discrimination. But what happens when these new outlets

ing scientific program at the Symposium. A discussion period followed the reading of the six papers.

are sought? The resentment of certain of the larger stores is so great that management then attempts to boycott, or at least to use pressure, to limit the distribution of fine perfumes to the stores which have been so non-cooperative in so many past instances. This may all sound mysteriously confusing to you. May I say that it is such an absurd situation as to be confusing to the executives of your companies, and I am confident that this grievous situation will be overcome by the play of economic pressures themselves.

There are no real trends of perfume distribution to the supermarkets. Perfumes, as such, are products which have earned the largest measure of consumer brand loyalty and, therefore, they will increasingly be products which the finer department and drug stores will be interested in carrying to encourage repeat customers. One of the great problems in retail merchandising today is this matter of encouraging repeat customers; and when a retail outlet becomes known because it stocks a product which the woman consumer demands, any intelligent merchant will foster trade in this commodity.

We are told that scientists soon will make our entire lives full of fragrance. Some of the least far-fetched examples are the "new car odor," which used car dealers can spray on an old jalopy to give that extra atmosphere to a prospective purchaser.

Inexpensive pocketbooks are sprayed with "leather" odor. A sporting goods house has developed an "odor" that conceals the smell of man entirely so that hunters can proceed undetected through the woods. An artificially bad smell has been added persuasively to an odorless chemical fertilizer to enhance its sales appeal to the novice suburban gardener. Even bags of grass seeds are being given a presumed odor of grass seed when grass seed is really odorless. Sales appeal in fragrance again.

I would like to leave the thought with you that by

their very nature, there can be no established trends in perfumes and that, in spite of the great difficulties encountered at this time in its development, the perfume trade will still, and for a number of years in the future, be largely concentrated in the existing retail channels: the department stores, the specialty stores and the drug stores of this country.

### "The Language and Indexing of Fragrance"

Camille H. Bourguet
American Aromatics, Inc.

The perfumer works with hundreds of fragrant materials, without any physical scale for arranging them, comparable to those available for colors and for musical notes. To work systematically, he must develop a classification system, and a means of olfactory analysis of complex fragrances. He must evolve mental concepts of the subtle notes that cooperate to produce an olfactory impression.

When a flower is smelled, the aromatic components do not appear one by one, but groupwise. We can detect in the red rose at least five of these characteristics: a key note, a green grouping, a spicy grouping, a honey sweetness, and a floral grouping. The key note is the most outstanding of these characteristics, for the purpose of grouping flowers according to their essential similarities. In many cases the key note of each flower can be characterized as centered about a given aromatic chemical, and can in practice be built up around this ingredient.

Using the floral keynotes as our criterion we can group the major floral fragrances in such a way that each bears a marked similarity to its neighbors. Starting with the violet, we go to cassia, mimosa, reseda, rose, the lillies, honeysuckle, jasmins, orange blossom, wisteria, locust, wallflower, heliotrope, hawthorn, lilac, carnation, ylang ylang, narcissus, tuberose, gardenia, clover, cyclamen, and back to the violet. Thus in one cycle the most important floral odors are classified in an easily used sequence. Non-floral odors can be classified by similar schemes. Thus some order may be brought into the chaotic world of fragrance.

### "Research Trends in Perfumery Materials"

Paul Z. Bedoukian, Ph.D.
Consulting Chemist

An enormous volume of chemical research underlies today's large-scale production of widely diversified synthetic odorants. During the past seventy-five years the structure of terpenes and terpene alcohols, and that of the major natural benzenoid odorants, was elucidated. For many of these naturally occurring materials, laboratory synthesis was followed by commercial manufacture. More recently, macrocyclic compounds have been added to those already commercially produced.

At present, the large-scale manufacture of synthetic linalool opens a new era, for many of the aliphatic materials up to now supplied only as isolates from essential oils, can now be synthesized. Trace components being discovered in essential oils by new analytical methods are making possible closer duplication of natural oils by use of synthetic odorants. A resurgence in the study of sesquiterpenes presages possible production of these valuable materials or of simpler derivatives of similar odor.

The future may see the trend away from essential oils reversed by the availability of better "Synthetic essential oils." Research will be intensified to identify still unknown key components of flowers, fruits and vegetables. Giant industries such as the food processors and soap producers may enter the field of research in odorous materials.

### "Odor Preferences Among Domestic Consumers"

Amos Turk, Ph.D.
Consulting Chemist

Sources of domestic odors include tobacco, food, people, toilets, building materials and furnishings, cosmetics and special or emergency circumstances. The odor composition prevalent at the source may be modified by fractional adsorption and desorption at various surfaces (including air-conditioning coils), by fractional evaporation and diffusion, and by bacterial action. Generally, such modification makes odors less pleasant. The use of domestic air-conditioning places a premium on odor improvement because it restricts ventilation.

Methods available for domestic odor control include catalytic oxidation (for cooking odors), activated carbon sorption, and the diffusion of pleasant odors. These methods are critically discussed from the viewpoints of cost, speed, objective, and consumer acceptance. Recent work on objective evaluation of odor preferences is cited, including the study of personality factors which may determine acceptance at subconscious levels. Finally, speculations are offered concerning the future role of fragrances for domestic uses.

### "What's Ahead for Instrumental Analysis in the Perfume Industry"

Ernst T. Theimer, Ph.D.
van Ameringen-Haebler, Inc.

Perfume materials are organic compounds, and methods for their analysis must be based on properties of organic materials. Chemical reactions of functional groups are gradually being supplemented and replaced by physical measurements which accomplish the task of determining these groups more rapidly with greater accuracy, and on smaller samples. Subtler differences can be detected and more complex mixtures studied with newer techniques only recently developed, whose future in the study of perfume materials appears very bright.

Ultraviolet spectrophotometry has specific usefulness on a limited scale, and is well established. Infrared spectrophotometry has a far greater value in the more intimate examination of pure substances and simple mixtures. Gas-Liquid Partition Chromatography, a newcomer of the last few years, promises to be the most useful tool for the separation and analysis of more complex mixtures. Nuclear magnetic resonance and mass spectrography and thermal diffusion are, with a few exceptions, fields for the future in aromatic chemical analysis. Combinations of several of the above techniques provide powerful tools.

Examples from the recent present, probabilities for the near future, and possibilities of the more distant future will be discussed. These will include functional group determination such as for primary, secondary, and tertiary alcohols, fine structure analysis, such as isomeric differentiation (methyl ionones; geraniol and nerol), and complex mixture separation as essential oils and flavor oils, (citronella oil, and strawberry essence) both as understood at present, and as anticipated for the future.

**Former President and Chairman of the Second Symposium Everett Kilmer discusses the interesting papers with Bernard Polak. Dr. Offner and Marshall Bennett share their well considered views.**

### "What's Ahead in Man-Made Fragrant Materials"

H. C. Saunders
Givaudan-Delawanna, Inc.

The trend toward the use of more synthetic products in perfumery is cited. The early resistance to this practice is being progressively replaced by a serious and determined effort to expand the uses of synthetics. This change is largely due to the steady expansion of the industries consuming perfume materials whose requirements can no longer be met by naturally derived products alone.

The search for fragrant bodies has branched out as it is now recognized that good perfume value is not limited to compounds with structures closely related to that of natural products. On the other hand it is becoming more apparent that the fragrance of natural isolates depend much upon the presence of their minor components. Some evidence of this is given.

It is acknowledged that the task of making fragrance compositions with new synthetic materials is a challenge to the creative perfumer. Practical approaches and suggestions to carry out this work are discussed.

A new synthetic, the structure of which is not similar to any of the structures produced in nature, is disclosed.

### Your Package . . .

HE CAN'T utter a word," says the *Phoenix Flame*. "Yet he can say a lot for you . . . and for your product.

"He sees many prospective buyers of your product every day. Questions are: How many see him? And like what they see?

"This chap's surrounded by direct and indirect competition. Thus he can't elaborate much. He can only give the barest facts, and he must get them over quickly.

"He can't give the history of your business. Can't call attention to your standing in your industry. Can't say what a splendid organization you have.

"But—he can suggest these things. By his appearance. By how well and how quickly he announces what he's selling. By how easy he will make dispensation, use and storage of your product.

"Who is this silent but influential salesman? He's a representative you can't afford to short change. He's your package."

### A Fast $2 or a Steady $1? . . .

Many companies are happy because their sales are better than a year ago. They aim to beat the record of the previous year which may not be so wise. In order to push sales they undertake uncontrollable selling costs. In order to prevent these from eating into profits they jack up prices. A quick $2 may be better than a steady income of $1 but sooner or later consumer resistance is to be encountered. That happened in the automobile business in 1956 and it could be repeated in other industries.

### National vs. Private Brands in Supermarkets . . .

The trend in supermarkets is toward more private brands. About 70% of 99 companies controlling 1,621 supermarkets report that in at least 80% of the stores more private brands appear now than five years ago according to a survey by Supermarket Merchandising.

**"Would you like to make a recorded statement about our hair rinse for posterity?"**

# *Smoking:* ITS EFFECT ON THE SENSE OF *Smell*

By

R. W. MONCRIEFF

There is a widespread belief that the habit of tobacco smoking dulls the sense of smell and that people who do not smoke derive more satisfaction from the flavour of food and drinks. Sometimes, it has been found, for example by Kenneth (1928) and by Wagenaar (1938), that women have a keener sense of smell than men, and their superiority has been attributed to their more common abstinence from tobacco. According to McCord and Witheridge (1949) "tobacco smoke has been the occasion of much domestic dissent. In some homes it contributes an unmistakable component to the total aromatic personality of the dwelling. In others it drives the several members to isolated quarters and leads to architectural demands that are difficult to provide on a modest building appropriation." It is incontestable that non-smokers are much more sensitive than are smokers towards tobacco-smoke and that they can easily detect the presence of tobacco-smoke in a room, or in the conditioned air of railway sleepers, when a habitual smoker might not be aware of it at all. But towards other smells, is there much difference? The author (1951) formerly accepted the popular view that smoking does reduce the sensitivity towards smells generally, but began to doubt if this reduction was very considerable during some work carried out along with two non-smokers. This work involved the frequent determination of the threshold concentrations of various odorants and, with one or two exceptions, there seemed not to be very much difference between the sensitivity of the non-smokers, both girls aged 17 and of the author, age 52, who smoked about fifteen cigarettes of a popular medium brand each day.

For an undefined reason the author stopped smoking for a period of six weeks and opportunity was taken to observe the changes in his threshold concentration towards four odorants. A minor breakdown in this arrangement occurred on the 19th day when two cigarettes were smoked and on the 20th day when three were smoked: otherwise no tobacco at all was smoked throughout the test period.

## METHOD

The technique employed was one that had been used by us for a period of six months on an investigation of some effects of olfactory adaptation; both observer and testers had become familiar with it and were able to obtain reproducible results; it had in fact developed into a routine. The observer, with eyes closed, sat on a stool near a slightly open window and there was touched under his nose, actually in the angle between his upper lip and his nose, a 6 oz. wide-necked bottle (kept stoppered except for the actual test) containing 20 ml. distilled water; the observer, when he felt the touch, inspired once, deliberately but not especially deeply; the bottle was removed and the observer breathed out; then a second bottle containing a dilute solution of the test odorant was touched under his nose and the observer again breathed in. This time he said 'yes' or 'no' according as he could, or could not, smell the dilute solution of odorant; 'doubtful' responses were accepted but were not encouraged. Thus, with his first breath the observer 'smelt' water to establish a standard of odourlessness and with his second he smelt at a dilute solution of odorant. There was an interval of about half a minute between successive tests, and after every four tests, the observer was rested for about 3 minutes to avoid any olfactory fatigue.

The four odorants used were

(1) ethyl mercaptan, which has a powerful repulsive smell, faecal when in high dilution, rather more alliaceous in stronger solutions;
(2) pyridine which has a gassy, rank objectionable odour, often reminiscent of tobacco smoke;
(3) butyric acid, which has a sour mawkish smell, reminiscent of stale sweat;
(4) triethylamine, which in dilute solution is both fishy and ammoniacal.

Each of the odorant materials was made into a number of dilute solutions freshly prepared for each series of trials, and each was offered (after water) five times to the observer; these test dilutions were offered in random order. Furthermore interspersed among them were five tests of water only, as a reliability check. Consequently the observer never knew whether the second bottle offered to him was likely to be a relatively strong solution, a very dilute one, or water itself. These precautions, we had found by experience to be necessary to secure objective appraisals.

Tests were made to find threshold concentrations of:

(a) the author during his usual 'smoking' life and of the two girl non-smokers;
(b) the author on the first, second, third, fourth, sixth, eighth, fifteenth, twenty-ninth, and forty-fourth days of the period of abstinence from tobacco.

The sub-lingual temperature and the pulse of the author were observed on each test occasion.

## RESULTS

In recording results, we use the signs '+' to indicate a 'yes' response (observer could smell the solution offered), '—' to indicate a 'no' and '?' a 'doubtful' response. Scoring is done on a basis of '+' counts 1 point, '?' counts a ½ point, and '—' counts nil. The threshold concentration is defined as that at which 50 per cent of the possible is scored; we term it the $PR_{50}$ concentration.

The experimental results for R.W.M. in the smoking period and for the two non-smokers, S.L. and S.T., are shown in Table 1. Those for R.W.M. in the non-smoking period are shown in Table 2.

An unexpected finding was that on the first day of abstinence there was a good deal of confusion in the results; irregularities were much more evident than usual and sometimes a lower score was obtained on a higher concentration than on a lower one. Possibly this was connected with the slight feeling of disorientation and confusion that characterized the first day. This had disappeared by the second day and the scores were then much less subject to irregularities. The regularity of the second day results is contrasted with the unevenness of the first day's results in Table 3.

## DISCUSSION

Examination of Table 1 shows that for the first three odorants ethyl mercaptan, butyric acid and triethylamine, there are no great differences between the threshold concentrations of the smoker R.W.M. and the non-smokers S.L. and S.T., but that for the odorant pyridine R.W.M. has a threshold concentration some twenty times higher than S.L. or S.T. This discrepancy might reasonably be attributed to tobacco-smoking because the smells of pyridine and tobacco smoke have something (fortunately not too much) in common. The chemical relationship, too, of nicotine and pyridine is close, in that the former consists of a methylpyrrolidine nucleus attached to a pyridine nucleus, and pyridine would normally appear as one of the products of the thermal decomposition of nicotine. According to Fishel and Haskins (1949), the tarry matter in the inspired smoke stream

TABLE 1.

Responses of three observers to aqueous solutions of odorants

| Odorant | Concentration (per cent.) | Observer | | |
|---|---|---|---|---|
| | | R.W.M. (smoker) | S.L. (non-smoker) | S.T. (non-smoker) |
| Ethyl mercaptan | 0.0000005 | + + — — + | — + + + + | + + + — — |
| | 0.00000035 | + — + — + | — + + + + | + + — ? + |
| | 0.0000002 | + — + + — | + + ? — + | + + + — — |
| | 0.0000001 | — — + — — | — — + — — | — — + + — |
| | 0 (water reliability check) | — — — — — | — — + + — | — — — — — |
| Pyridine | 0.001 | + + + + + | + + + + + | + + + + + |
| | 0.0005 | + + + + + | + + + — + | + + + + + |
| | 0.0001 | — ? — ? — | + ? + — — | + + + — + |
| | 0.00005 | — — — — — | + + + — + | + + — + + |
| | 0.000035 | — — — — — | + + + + + | + + + + + |
| | 0.00002 | — — — — — | + — — + — | + — — — + |
| | 0.00001 | — — — — — | — — — — — | — — — — — |
| | 0 (water reliability check) | — — — — — | — + — — — | — — — — — |
| Butyric acid | 0.005 | + + + + + | + + + + + | + + + + + |
| | 0.001 | + + + + + | + + — + — | + + + + + |
| | 0.0005 | — — + + + | — ? ? + + | + + + + + |
| | 0 (water reliability check) | ? — — — — | ? — — — — | — — — — ? |
| Triethylamine | 0.01 | + — + + + | + + + + + | + + + — + |
| | 0.005 | + + — + + | + — + — + | + — + + + |
| | 0.001 | + + + + + | + — + + + | + — + + + |
| | 0.0005 | — — ? — — | + — ? — — | — — + + — |
| | 0 (water reliability check | — — + + — | — ? — + — | — — — — — |

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TABLE 2

The effect of abstention from cigarette smoking on the threshold concentration (R.W.M.) of certain odorants

| Day of abstinence | Body temperature (°F) | Pulse (per min.) | $FR_{50}$ concentration (per cent.) of | | | |
|---|---|---|---|---|---|---|
| | | | Ethyl mercaptan | Pyridine | Butyric acid | Triethylamine |
| Average prior to abstinence | 97.6 | 75 | 0.0000002 | 0.0005 | 0.0005 | 0.001 |
| 1 | 98.4 | 67 | 0.0000002 | 0.0001 | 0.001 | 0.001 |
| 2 | 98.2 | 71 | 0.00000015 | 0.00005 | 0.001 | 0.001 |
| 3 | 98.2 | 73 | 0.0000002 | 0.00001 | 0.0005 | 0.001 |
| 4 | 97.1 | 62 | 0.0000002 | 0.00005 | 0.001 | 0.0005 |
| 6 | 98.0 | 64 | 0.0000002 | 0.00001 | 0.001 | 0.005 |
| 8 | 98.0 | 71 | 0.0000002 | 0.0001 | 0.004 | 0.002 |
| 15 | 98.2 | 67 | 0.0000001 | 0.00001 | 0.0001 | 0.001 |
| 29 | 97.7 | 71 | 0.0000002 | 0.00001 | 0.001 | 0.002 |
| 44 | 98.4 | 68 | 0.0000001 | 0.00001 | 0.001 | 0.002 |

TABLE 3

Comparison of olfactory responses on the first and second day of abstention from cigarette smoking

| Odorant | Concentration (per cent.) | Percentage positive responses on | |
|---|---|---|---|
| | | 1st day | 2nd day |
| Ethyl mercaptan | 0.0000005 | 36 | 70 |
| | 0.0000002 | 50 | 60 |
| | 0.00000015 | 0 | 60 |
| | 0.0000001 | 40 | 10 |
| | 0 (water reliability check) | 27 | 10 |
| Pyridine | 0.0001 | 60 | 100 |
| | 0.00005 | 40 | 80 |
| | 0.00002 | 0 | 20 |
| | 0 (water reliability check) | 20 | 0 |
| Butyric acid | 0.001 | 80 | 80 |
| | 0.0005 | 30 | 30 |
| | 0.0002 | 33 | 0 |
| | 0 (water reliability check) | 30 | 0 |
| Triethylamine | 0.002 | 90 | 60 |
| | 0.001 | 80 | 50 |
| | 0.0005 | 40 | 20 |
| | 0 (water reliability check) | 10 | 20 |

from a cigarette contains nicotine, pyridine and picolines; these last are homologues of pyridine and not unlike it in smell. The presence of some of the picolines, lutidines, and collidines in tobacco smoke may not have been proved beyond doubt, but that of pyridine itself

has been conclusively established and six different papers to this effect have been cited by Kosak (1954).

Further, it can be seen from Table 2 that following the cessation of tobacco smoking the threshold concentration of pyridine fell from 0.0005 per cent to 0.0001 per cent on the first day and after a week or so it had fallen to 0.00001 per cent, so that within this period it fell some fifty times, and then remained unchanged up to the expiration of a six-week period. It is noteworthy that this value of 0.00001 per cent is of the same order as the pyridine threshold for the two non-smokers.

The other three substances, ethyl mercaptan, butyric acid and triethylamine, which we have frequently used as representative malodors, showed little or no change in threshold value after six weeks abstention from smoking. These experimental findings, reinforced as they are by the author's experience over a long period that he can smell essential oils at about the same dilution as the two non-smokers and that the threshold concentrations for a number of different chemical entitles, notably acetone, *iso*propanol, *n*-butanol, cellosolve (monoethyl ether of ethylene glycol), $\alpha$- and $\beta$ -ionones, and amyl and butyl acetates, have been carefully measured for the three observers and show good general agreement, point to the fact that tobacco-smoking reduces the sensitivity of the sense of smell to odours that are like tobacco smoke, but that it has little or no effect on the sensitivity to smells of other kinds.

The slight mental confusion that characterized the first day of abstinence is probably related to a similar experience that some people have on learning to smoke, for example Ruckmick (1924), and to the dizziness experienced by many people who have a cigarette after having gone without for a day or so.

Of the other physiological changes that accompanied the cessation of tobacco-smoking the only one that was certain was a considerable improvement in reading vision (no glasses are worn).

## SUMMARY


1. Comparison of the sensitivity of smell of a cigarette smoker with two non-smokers showed that for ethyl mercaptan (faecal smell), for butyric acid (sweaty smell) and for triethylamine (fishy ammoniacal smell) there were no significant differences. For pyridine (rank tobacco smell) the cigarette smoker was some twenty times less sensitive than were the non-smokers.
2. When cigarette smoking was given up, the (previous) smoker's sensitivity to pyridine increased rapidly and within a week was equal to that of the observers who had never smoked.
3. On the first day of abstention from smoking there was some mental indecision which was reflected in irregularity of experimental observations, but by the second day this had disappeared.
4. There are indications that the tobacco habit blunts the sense of smell only towards tobacco-like odours and does not impair its efficiency towards smells of other kinds.



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### REFERENCES


Fishel, J. B. & Haskins, J. F. (1949). *Ind. Engng. Chem.*, 41, 1374-1376
Kenneth, J. H. (1928). Odour associations. *Perf. Essent. Oil Record*, 19, 15.
Kosak, A. I. (1954). The composition of tobacco smoke, *Experientia*, 10, 69-71.
McCord, C. P. & Whitheridge, W. N. (1949). *Odors: Physiology and Control*, p. 109. McGraw-Hill: New York.
Moncrieff, R. W. (1951). "The Chemical Senses" 2nd Edn., p. 97. London: Leonard Hill.
Ruckmick, C. A. (1924). Experiences during learning to smoke. *Amer. J. Psychol.*, 35, 402-406.
Wagenaar, M. (1938). Meetinstrument ter beoordeeling van het reukvermogen, *Chem. Weekblad*, 35, 618-621.



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# Croda News

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# I-Quiz

***This Month's Quiz Master***

**Max A. Goldzieher, M.D.**
New York 16, New York

QUESTION. 1. *Gardner recently reported the production of cancers following application of estrogens directly to "body tissue." Does this mean that skin cancer can result from the use of estrogen containing cosmetic creams or lotions of* 5,000 *or* 10,000 *I.U. per ounce?*

ANSWER. Ever since the introduction of hormonal cosmetics repeated attempts have been made to scare the public with the "cancer menace." There are no facts to substantiate such fears. Cancer can be produced by estrogen only in susceptible animals of specially bred strains by giving them truly enormous doses over a period of time which covers at least one-third or more of their life span. These cancers develop in the breast and much less often in the womb of the treated animals. There was never any cancer formation of the skin.

QUESTION 2. *Is there any medical record of adverse reaction following the use of estrogen containing cosmetics?*

ANSWER. The amounts of estrogen present in the current hormone cosmetics are so small that they do not disturb the hormonal balance of the body and are incapable of causing any trouble anywhere in the body. Hormone creams have been used extensively for the past fifteen years and there is no evidence available of any adverse reaction to their use nor has there been any verified case of cancer of either the skin or any internal organ which could be attributed to the hormone cream.

**Long Range Business Forecasting . . .**

Paradoxical as it may sound man learns his future by looking forward into the past. For that reason many of the long range forecasts on business and economic conditions now afflicting the country may be nothing more than economic astrology. Forecasting is an art that requires long experience, adequate knowledge of facts and seasoned judgement for even semi-satisfactory results. Although there has been some progress in removing random factors in forecasting such as serious business disturbances and the like, long range efforts toward predicting economic betterment still remain highly speculative ventures.

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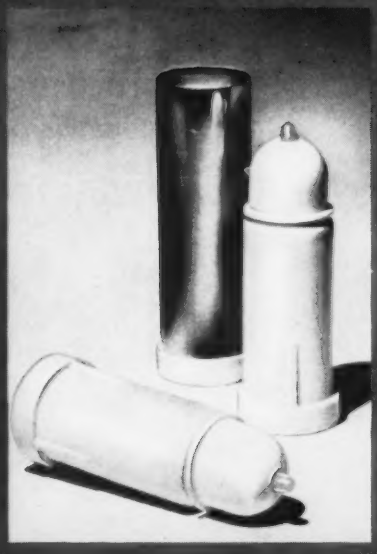

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# Packaging and Promotion

1.

## 1. CARTER PRODUCTS

New Arrid Men's Spray Deodorant is being introduced nationally by Carter Products, Inc., with the heaviest advertising support ever given a product of this type. The new Arrid Men's Spray Deodorant comes in a specially designed red, white and blue package. The price is 59¢ plus tax.

2.

## 2. ELIZABETH ARDEN

Elizabeth Arden has designed an "Around the World" beauty kit with all the preparations needed for a trip around the world or for a weekend. The kit is designed of simulated leather in shades of soft cyclamen or crimson, and contains Cleansing Cream, a choice of either Orange Skin Cream or Velva Cream, Illusion face powder, foundation, cream rouge, eye shade, and the Elizabeth Arden duet lipstick containing two shades. $5.00.

3.

## 3. TINKERBELL

For beginners in beauty, tinkerbell fills a pink and white striped closet with scented treasures. A floral tipped, real fur muff, full of sachet, fills the closet's top shelf, while talc and toilet water comprise the main section of the package. The Pretty Closet is priced at $2.25.

## 4. LITTLE LADY

Three good grooming essentials for little girls are featured in Little Lady Toiletries' new Dutch Treat Tulip Trio. There is an ounce each of Toilet Water, Cologne, and Hand Lotion. These colorful, tulip shaped bottles are packaged as three tulips growing in a blue flower-pot. Each set is individually packaged in a sturdy carton for added protection and ease of handling. Price is $1.75 plus tax.

### 5. MARY CHESS

Essence Spray in four of Mary Chess fragrances—White Lilac, Tapestry, Strategy and Yram—makes its debut in a new "aerosol mistifier" topped bottle. A light touch of the mistifier releases a fine spray of the essence—an essence less pronounced than perfume yet more dominant than toilet water. Essence Spray comes in a gold-capped pyramid-shaped bottle decorated with a paneled gold and white label. The 2 oz. bottle is $3.50 and the 3¾ oz. bottle is $4.50.

4.

### 6. CHANEL

Contributing to the growing trend towards the use of colognes by men, Chanel has introduced its EAU DE COLOGNE "POUR MONSIEUR," a bright and refreshing tonic cologne which imparts to the skin, a faint but lasting fragrance thoroughly masculine. Ingredients in this product will inhibit skin bacterial growth, making the preparation not only a stimulating body rub but a tingling after-shave lotion. "POUR MONSIEUR" contains 4 oz. and retails at $5.00 plus tax.

### 7. PRETTY FEET, INC.

Pretty Feet, Inc. has embarked on a half million dollar expenditure for its Pretty Feet campaign. Pretty Feet is a new 30-second foot lotion that removes rough, dry skin from feet, elbows, and hands. Results in test cities are reported above expectations. Heavy emphasis is being placed on distribution through beauty and barber shops.

### 8. ROGER AND GALLET

A sleek new, Parisian package and bottle label grace Roger & Gallet's "Cologne Shower" after March 1st. The package is in clean-cut black and white, touched with red. In four fragrances, the color of the cologne itself is part of the package design. BLUE CARNATION is blue— LE JADE is green—VIOLETTE DE PARME is violet—NATURELLE is natural. A regular $2.00 value—8 ounces—"Cologne Shower" will be specialed at $1.00 for the summer months.

5.

6.

7.

8.

# AEROSCRIPTS

Jack Pickthall

## Medicinal Aerosols

I HAD been told that an aerosol product was exciting considerable interest at the Medical Exhibition recently held at the Horticultural Hall, London and I felt tempted to see what it was all about. Getting in without a stethoscope was no mean feat but the effort was worth while because an aerosol product was causing a stir. Mention of the product has since been made in various journals but there are several aspects which make it an interesting topic when viewed from the aerosol angle. The product is Polybactrin, an antibiotic powder spray—and there is no doubt that doctors were greatly interested. Each pack contains Neomycin Sulphate 750 mg. Polymixin 'B' Sulphate 150,000 units, Zinc Bacitracin 37,500 units, Propellant 83.5g. Net contents 85 g. The price is about £2. The product is marketed by Calmic Ltd., and filled by M. & R. Norton using the Vapsol detachable valve. This Italian valve is said to contain several special features which make for efficient powder spraying, thus the rubber seating is of special flexibility and the spray tension specially designed. In addition, the nozzle cylinder in the powder spray is straight as opposed to the spiral action for liquid dispersion. The micro dip-tube is reputed to increase the length of life of the contents. The tapered round bottle is adequately coated with 0.03 inch of polyvinyl chloride.

The propellant is tetrafluorodichloroethane and the gauge pressure 24 p.s.i. at 70°F. This is no attempt to advertise a new product but simply to try and visualize the importance of the aerosol technique in the field of medicine. In point of fact, what advantages does this new presentation offer? The claims are that the three antibiotics are presented in an ultra fine powder form (60 microns was mentioned to me) and whilst the bactericidal properties are well known, bacteriological tests with the pressurized product have shown the remarkable speed and economy of product in securing complete inhibition of wound pathogens.

Partly shielded plates inoculated with staphylococcus aureus were exposed to the influence of one-fifth second pressure of the button of the unit at distances of one-half and one metre. At both distances, complete inhibition was obtained. In a second test the powder was released for two seconds in a draught-free room and immediately afterwards a number of partly shielded plates were exposed successively for thirty seconds each in the area of the sprayed zone. The results showed that complete inhibition was obtained after thirty seconds exposure of the first plate and almost complete inhibition after the same time of exposure of the second plate. Even the third and fourth plates showed significant areas of inhibition after thirty seconds of exposure, thus indicating that after a two second spray solid particles of antibiotics remained suspended in the air for at least a period of two minutes. Identical tests using Ps. pyocyaneus as the test organism produced the same results. The antibiotics employed are rarely given systemically. Their action when applied locally extends no further than the tissues under treatment. Their combined action is synergistic and includes the whole range of wound pathogens. Owing to the rapid bactericidal action of these three antibiotics, the risk of the development of bacterial resistance is reduced to the absolute minimum.

*The Aerosol Age*, September 1956 in an article entitled "Aerosol Therapy" neatly summarizes the advantages of dispensing medicinal products in aerosol form. Medicinal products packaged in aerosol form would possess the following advantages:

1. ease of application.
2. speed of application.
3. efficiency of dispersion.
4. no possible contamination of product with foreign materials.
5. direct local application.
6. uniform dosage.
7. possibility of obtaining a high concentration of drug over a limited area.
8. almost instantaneous response to the medication.
9. less danger of decomposition of the medication since it does not pass through the gastro-intenstinal tract.

For the moment, the Polybactrin unit is for hospitals only but its ultimate use for surgery and even the home can be anticipated. Personally, I have tried out the unit on two casualties with remarkable success.

## Technical Bulletins

I HAVE received from Mr. A. Herzka of of the Metal Box Co. Limited, some excellent technical bulletins dealing with many aspects of aerosol filling. They are of obvious help and interest to established workers in the field and perhaps more particularly to newcomers.

Many subjects are covered and these include:

Suppliers of propellants together with certain technical details.

Details of the metal box experimental cooling and filling unit. Operational hints are included.

The use of 'pop' bottles in laboratory investigation, including miscibility tests, corrosion tests and safety precautions.

Application of surface sprays (lacquers, enamels, etc.) in pressurized dispensers. This gives a host of hints on the use of the Safca valve for these products.

Details of aluminum and tin-plate containers.

Determination of filling weights for pressurized packs.

Details and formulation of blue, red and black 'touch-up' lacquers, also special formulation for 'touch-up' lacquer for leather. Also, wood finishes and aluminum based primer.

Formulae for insecticides, sun-tan preparation and hand-creams are included.

Finally, names and addresses of contract fillers and makers of 'Aerosol approved' perfumes are given.

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## Analysis of Volatile Aerosol Constituents

M. J. ROOT and M. J. MAURY*

Analysis of the volatile components in aerosol products presented unusual problems until the advent of gas-liquid phase chromatography. Such components range in boiling points from as low as —21.7° F. for the propellents to over 100° F. for some of the solvents. Propellents may include the chloro-fluoro methanes and ethanes and the hydrocarbons through $C_4$. Solvents include ethyl alcohol, methylene chloride, acetone, naphthas and other volatile materials having vapor pressures about 760 mm. at or slightly above room temperatures.

Although fluorinated hydrocarbon mixtures have been commonly analyzed by mass spectrometry, infrared spectrophotometry, liquid density measurements and vapor pressure, the admixture of other volatile solvents makes such techniques of little value. Although theoretically a fractionating column could be used to separate and identify such mixtures, practically, because of the great disparity in boiling points of some of the components and closeness of others, such an approach would be difficult if not impossible.

It was A. T. James and S. P. Martin in 1951 who first showed the way to use gas-liquid partition chromatography for the analysis and separation of fatty acids from formic to dodecanoic. Unaware as they were even at that recent date of the problems involved in analyzing the volatile components in an aerosol product, their solution to this problem could not have been more complete and successful.

Gas-liquid partition chromatography for the first time permits taking a sample of .01 to .2 ml. liquid or .05 to 25 ml. gas at atmospheric or reduced pressures, separating it into its components, recording the qualitative and quantitative values and completing the operation in a matter of minutes with an accuracy of plus or minus a few tenths of one percent. Furthermore, each component can be recovered for infra-red spectrophotometric analysis or mass spectrometry.

Commercial Gas Chromatographs are now available which utilize the liquid-gas partition chromatographic technique. Such instruments are particularly well suited for use in the aerosol industry for the following:

1. Identification and analysis of propellents and propellent mixtures.
2. Quality control of aerosol products.
3. Checking propellents and volatile components for contamination.
4. Detection of air in liquid and gaseous phases.
5. Analyzing liquid and gaseous phases of aerosol products.

Equipment cost is low in comparison to spectrometric methods and, once the details of operations have been worked out, analysis can be carried out by a technician. The speed, accuracy, ease of operation, extreme versatility and low cost of gas chromatography have prompted chemists to call this the most significant analytical advance in the last twenty years. Aerosol technology will benefit greatly by utilizing this new analytical tool practically tailor-made for its needs.

*Abstract of paper read before the Chemical Specialties Manufacturers Assn. December 4, 1956.

## Aerosol Packaging of Water Based Solutions and Active Ingredients

Whole new fields of push-button packaging may be opened up by the development of a new emulsifying system, making possible the aerosol packaging of water-based solutions and active ingredients not strictly soluble in commonly used propellents, Du Pont researchers believe.

Although a few water-base products, such as shaving cream, have been adapted already to pressurized packaging to give a foam discharge, the new system permits a wide range of discharge patterns, varying from soft, space-type sprays to wet, residual-type sprays. Other advantages, of particular interest in cosmetics and pharmaceuticals, include the development of formulations which create no undesirable cooling when applied to the skin and which are capable of depositing active ingredient coatings not readily removed by washing.

Work by Du Pont indicates the emulsion system may make possible an expanded line of aerosol personal products like antiperspirants and deodorants, depilatories, permanent waving solutions for use on the hair, skin freshener and astringent solutions, fungicides, bactericides and antiseptics, sun tan sprays, hair sprays, poison ivy remedies, hair tints, insect bite lotions, and insect repellents. Other types of products to which the Du Pont-developed system is expected to be applicable include metal cleaners and polishes, antifog-solutions, stain removers, water-soluble antibiotics, leather cleaners, air deodorizers, window cleaners, hand cleaners, and antistatic agents.

Many of the suggested types of products already are available in aerosol packages. However, in many cases, the new system will extend the range of formulation possibilities of these as well as other products.

Usual aerosol emulsion products up to this time, Du Pont chemists explained, have been oil-in-water systems where the propellent is dispersed in the aqueous phase. Attempts to obtain sprays from systems of this type by increasing the proportion of the propellent usually result in extensive foaming problems, either at the orifice of the aerosol valve or on the sprayed surface.

The Du Pont emulsion system is based upon water-in-oil emulsions where water in the final formulation is dispersed in the "Freon" propellent. Such systems use oil-soluble, surface-active agents which tend to produce less foam upon spraying than do water-soluble agents. The oil phase may consist of propellent alone or a mixture of propellent and hydrocarbon oil, such as odorless mineral spirits or deodorized kerosene.

"With systems of this type," Du Pont chemists explained, "it is now possible to prepare water-based room deodorants, antiperspirants, and many other products utilizing water-soluble active ingredients."

## Aerosol Notes

Because of the ease and speed with which a spray product may be applied in measured amounts, antibiotics, anesthetics and antiseptics for topical application may be largely converted to aerosol packaging before long according to E. I. duPont deNemours & Co. In 1955 almost a million and a half aerosol packages of medicinal and pharmaceutical items were produced. The company points out that the aerosol package protects the contents from contamination, preserves the potency of the active ingredients and prevents evaporation when not in use. For careful dosage the metering valve controls the amount of medicament discharged.

An antibiotic wound dressing in an aerosol container which is said to cover affected areas with a transparent non-inflammable film is offered by Shueler & Co., 75 Cliff St., New York 38, N.Y. It is reported to be non-sensitizing and non-allergenic and that it assists coagulation and stimulates granulation. The product is named Spray Band.

Aerosol products are featured in almost twice as many advertisements, including TV commercials, as in 1955 according to a survey by Aerosol Techniques, Inc., Bridgeport, Conn. The heaviest increase in newspaper space devoted to push button aids has been registered in the department store and super market fields.

Carbide & Carbon Chemicals Co. has entered the fluorocarbons field and has announced plans to build a 50 million pound per year unit, at Institute, W. Va.

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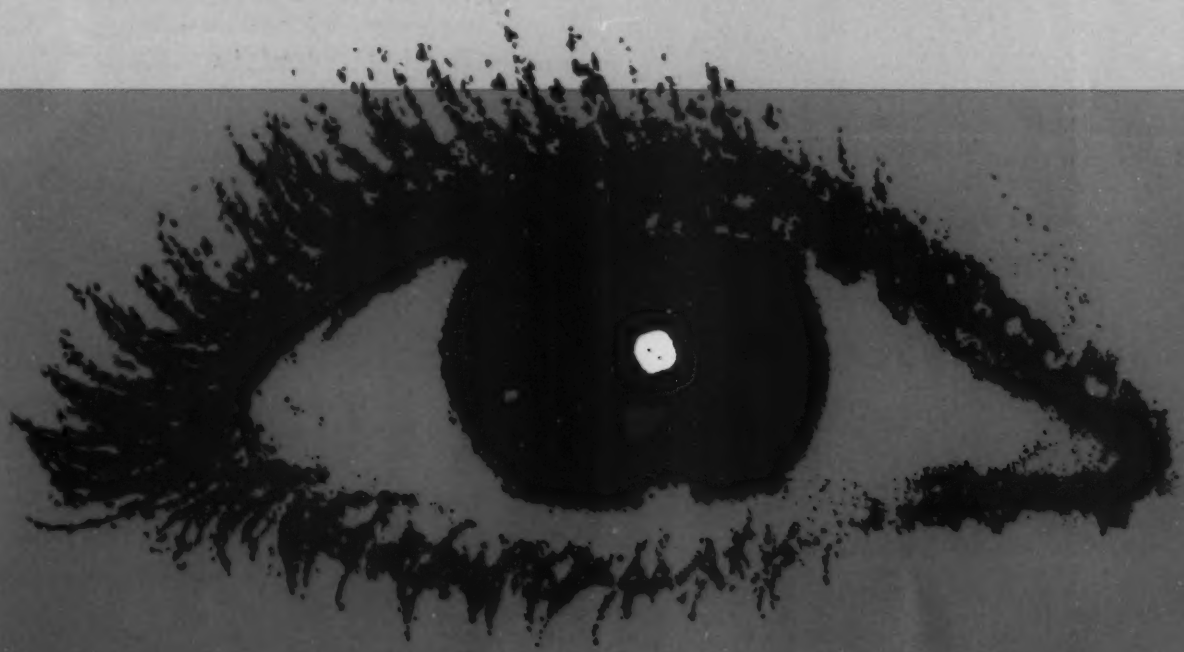

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SOAP SECTION

# Manufacture of Soap

WALTER HARDY*

**Soap still leads detergents in some applications . . . The cost to produce the average toilet soap bar is about one cent**

ONE OF THE most spectacular industrial developments of the postwar era has been the progressive replacement of soaps by synthetic detergents. It is estimated that synthetic detergents will have captured 70% of the total market by 1960. Household detergents and cleaning compounds consume about 80% of all of the synthetic detergents produced, and it is from this type of product that soap has been to a large extent displaced. Of the other products commonly based on soap, only such cosmetic preparations as shampoos, dentifrices, shaving creams, and similar products have been reformulated with synthetic detergents to a large extent.

In some applications soap remains the leader. In soft water areas, both bar and powdered soap products may be preferred on the basis of price alone. No detergent bars for laundry use are now marketed. Detergent toilet bars have not yet been entirely perfected, although such products have been

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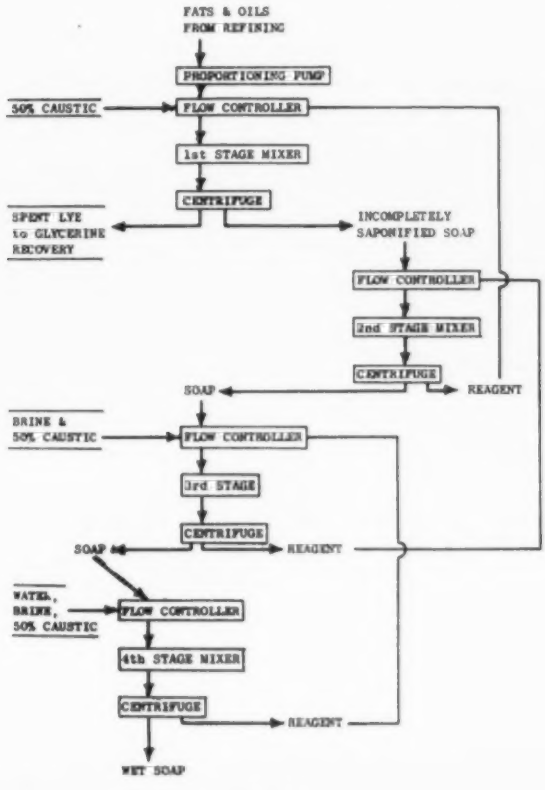


Figure 1

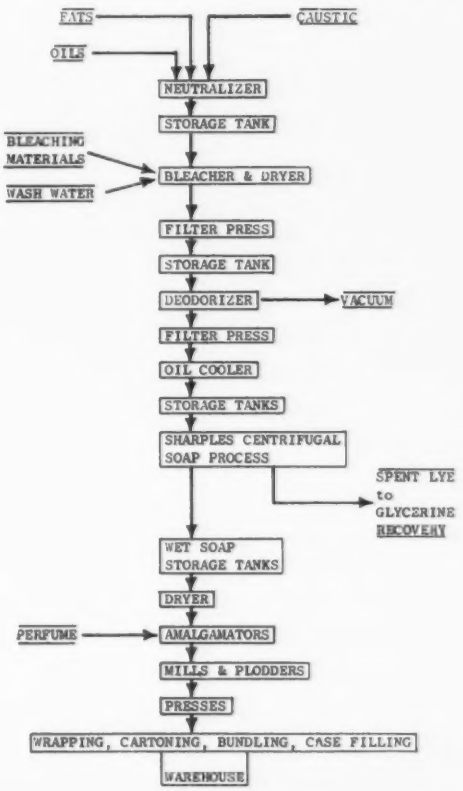


Figure 2

successful test marketed in some areas. Many technical problems remain to be solved before a detergent bar can successfully replace bar toilet soaps.

Even at best it appears likely that such bar detergents will have to sell at premium prices and will find their greatest markets in hard water areas. It can be anticipated that installation of new toilet soap manufacturing capacity may be economically sound, even in areas where laundry soaps are eclipsed by the new synthetics.

The manufacture of toilet soaps differs from that of laundry soaps, both as to purity of the raw materials and after treatment of the saponified neat soap to produce desired physical characteristics. All fats and oils used in toilet soap production must be refined. This calls for neutralization, washing, vacuum drying, bleaching, and deodorizing steps. These processes are, in principle, similar to those used in refining edible oils and have been described in greater detail previously [IND. ENG. CHEM., 47, 63 A, (December 1955)]. The refined oils are saponified by either a conventional kettle process or by a continuous procedure such as the Sharples centrifugal soap process.

A continuous process would generally be preferred for a new plant. Although the initial cost is considerably higher than for a kettle-type plant, operating economies and superior product quality easily justify the investment. The conventional kettle plant to produce boiled process soap is too well known to justify review here. Figure 1 is a flow diagram of the Sharples centrifugal soap process, which is probably the best known of several continuous processes. The conversion of fat and oil to neat soap takes place continuously in four stages. These include depletion of the lye, complete saponification, recovery of glycerine, and fitting to produce neat soap. The flowsheet illustrates, in a general way, the stages of the process and the countercurrent flow of fat and reagents, but does not show the considerable instrumentation involved. Flow rates, temperatures, and pressures are continuously and automatically controlled.

The continuous process produces a lighter neat soap than that obtained in a kettle plant. This is probably due to the short processing time, reduced contact with air, reduced iron contamination, and greater degree of clarification resulting from the use of centrifuges. Steam and water consumption are far less than required in a kettle plant. Labor costs are lower also although maintenance and power costs are greater than in the conventional process.

Following saponification, the wet soap is passed over cast iron chilling rolls from which it is removed in ribbons by a doctor blade. The soap ribbons are passed through a continuous dryer and a cooling chamber. The dried soap is mixed with coloring materials, perfumes, and preservative in an amalgamator. This is simply a chamber fitted with heavy duty paddles which mix and knead the batch.

The amalgamated soap is then passed through a series of granite rolls which act to combine the soap and other ingredients into a homogeneous mass. The soap leaving the rolls is fed to plodders, which are similar to meat grinders and extrude the soap by a screw agitator action into a continuous bar. The extruded soap is cut into bars and these are stamped into the ultimate product form by dies in automatic cake presses. The finished soap is then wrapped and packaged in cartons and cases for shipment. Figure 2 is a flow diagram showing the entire process for manufacturing toilet soap.

A medium-sized toilet soap plant might have a capacity of 20 tons of toilet soap per day. The estimated total erected cost of such a plant is $1,074,000. The cost of processing raw fat and oil soap stocks into finished toilet bars is approximately $96.40 per ton of packaged product. This works out to approximately 1 cent for a 3.6 ounce bar which will retail from 8 to 10 cents. To this processing cost should be added the cost of the original fat and processing chemicals less the credit for by-product crude glycerine. These costs have not been considered here. Toilet soaps vary considerably in formulation and in the specifications of the initial fats and oils. Certain soap stocks are superior to others in detergency of the product, soap lathering power, and soap cosmetic properties. Differences in soap stock prices will be reflected in the production cost of the finished soap. Processing costs, however, will remain the same.

### Estimated Investment Cost of Toilet Soap Plant

(20-ton-per-day capacity)

| | |
|---|---|
| **Equipment** | |
| Fat and oil refining plant including neutralizing vessels, neutral oil tank, caustic dissolving and measuring tanks, foots tanks, bleachers, bleached oil tank, filter presses, deodorizers, deodorizer oil heater, pumps, and auxiliary equipment | $138,000 |
| Continuous centrifugal process soap plant including all centrifuges, mixers, pumps, heaters, process tanks, controls, and all necessary auxiliary equipment | $140,000 |
| Wet soap storage and drying equipment including wet soap storage tanks, soap transfer pumps, soap dryer and chiller, and cold water generator | $ 64,000 |
| Toilet soap finishing including amalgamators, roll mills, plodders, cutter, and soap stamping presses | $ 48,000 |
| Toilet soap packaging including soap wrappers, cartoner, bundling machine, case filler, and sealer | $ 50,000 |
| Lift trucks and miscellaneous equipment, piping, and instrumentation | $ 34,000 |
| Total equipment cost | $474,000 |
| Estimated erection cost | $290,000 |
| Estimated cost of building and site | $310,000 |
| Total erected plant cost | $1,074,000 |

### Estimated Processing Cost

(20-ton-per-day capacity, 24-hour basis, 260 days per year)

| | Per Day |
|---|---|
| Labor (excluding maintenance labor) | |
| Unskilled, 96 man-hours at $1.60 | $ 153.60 |
| Semiskilled, 72 man-hours at $2.10 | 151.20 |
| Skilled, 72 man-hours at $2.50 | 180.00 |
| Supervision, 8 man-hours at $4.00 | 32.00 |
| Reserve at 20% | 103.36 |
| Total labor | $ 620.16 |
| Utilities | |
| Steam at $1.00/1000 lb. | $ 123.00 |
| Power at $0.025/kw.-hr. | 32.00 |
| Water at $0.02/1000 gal. | 22.52 |
| Refrigeration at $0.50/ton day | 11.26 |
| Total utilities | $ 188.78 |
| Maintenance cost (including maintenance labor) at 6% per year of total erected plant cost | $ 248.00 |
| Depreciation to cover equipment deterioration and process obsolescence, etc., at 10% of total erected plant cost | $ 670.00 |
| Other, to cover taxes, insurance, etc., at 3% of total erected plant cost | $ 201.00 |
| Total estimated processing cost per day | $1927.94 |
| Total estimated processing cost per ton of toilet soap in bars (excluding cost of packaging materials) | $ 96.40 |
| Total estimated processing cost per average bar of toilet soap (3.6 ounces) | 1.08 cents |

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Jasmin
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Divinia
Florida
Gardenia
Heliotrope
Honeysuckle
Jasmin
Jockey Club
Lavender
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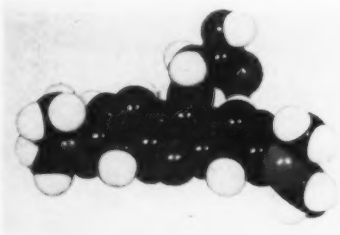

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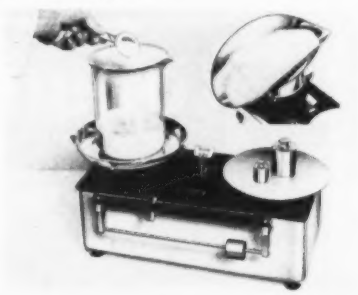

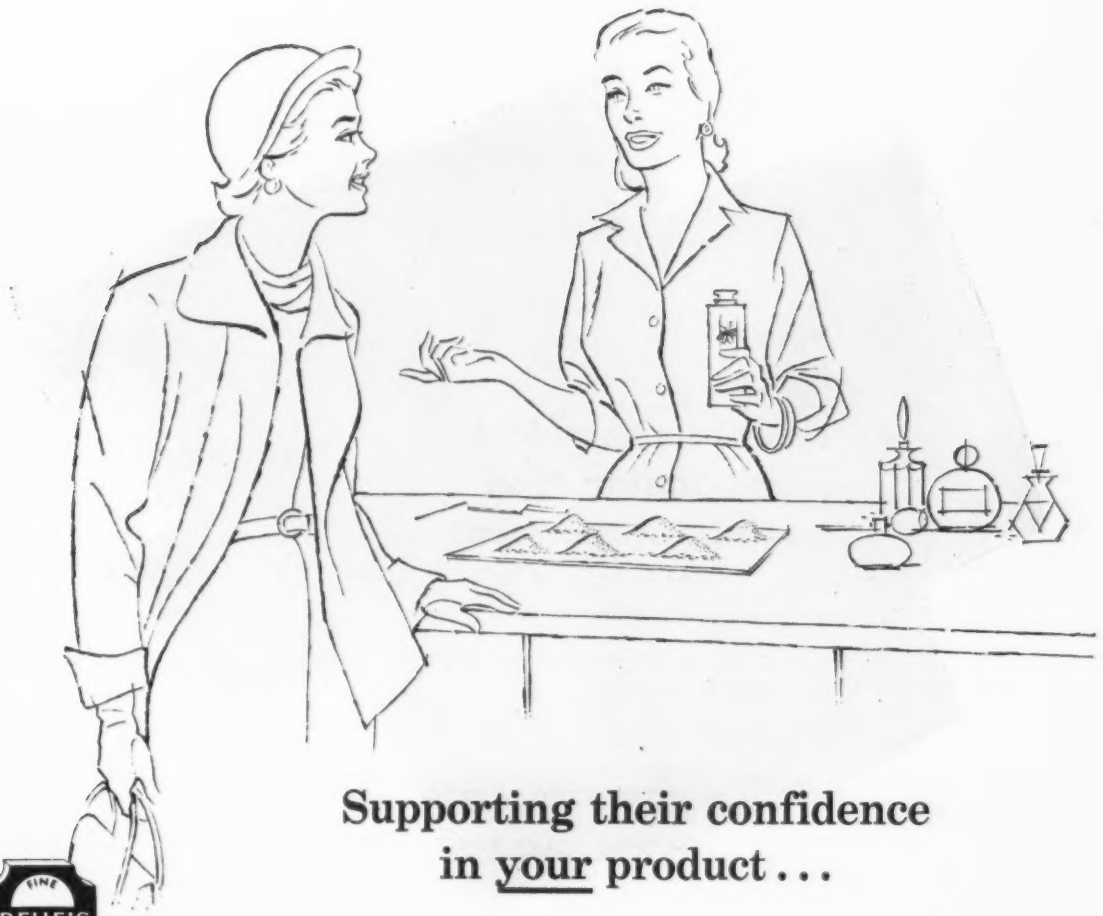

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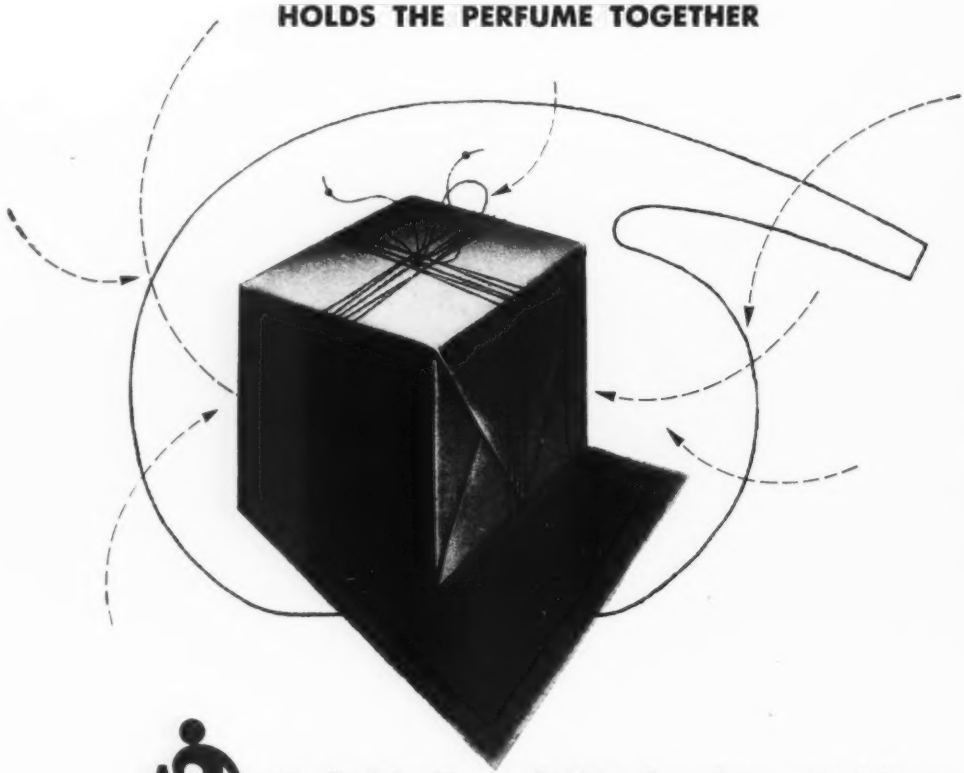

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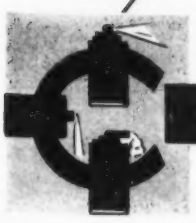

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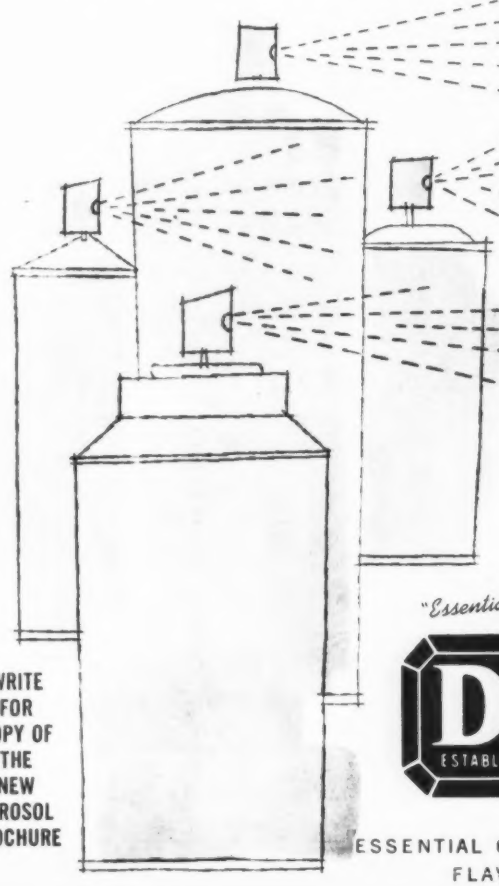

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# Beverage Flavoring

MORRIS B. JACOBS, Ph. D.

**The proper flavoring of carbonated nonalcoholic beverages is a most important part of the manufacture of such products.**

In past issues of the *American Perfumer*, particularly in the issues of February and March, 1950, *Am. Perfumer Essent. Oil Rev.*, *55*, 131, 215 (1950), I discussed the topic of the flavoring of beverages. Since I have not considered this topic over a period of years, it will be worth reviewing it again.

### Flavor Sensation

I have pointed out in the past that the flavor sensation is in reality a complex of sensations. Thus for example, the flavor of a ginger ale is the resultant of the sensations attributable to the sweet taste of the sugar or other sweetening agent, the sour taste of the acidulant, the pungent taste of the ginger, the taste and odor sensations of the other flavoring components, the tickling sensation caused by the impingement of the bubbles of escaping carbon dioxide gas against the walls and roof of the mouth and the tongue, the sensation of coldness due to the low temperature of the beverage, the body effect of the sugar, and finally the feeling of satisfaction given by a good soft drink.

### Sugar

As mentioned the sugars and sirups used in the preparation of soft drinks play a part in the flavor sensation but their role is more than that of mere sweetening agents. This has been stressed by a number of authorities. There are in addition three principal flavor functions, namely, (1) sugars provide the sweetness necessary to balance properly the acid and other taste-producing components and thus produce a balanced flavored soft drink; (2) sugars furnish sufficient body to raise the beverage out of the sweetened watery class; and (3) sugars serve to carry the flavor and thus deposit it uniformly when consumed.

There are four main groups of sugar ingredients used in making carbonated soft drinks, namely, crystalline sucrose from sugar cane and sugar beet, "liquid sugar" that is, concentrated solutions of pure sucrose, the various dextrose (chemically D-glucose) sugars, and a group of sirups such as invert sugar sirups. These may play a different role.

For instance, it is well known that dextrose does not have as great sweetening power as an equal weight of sucrose. Thus if the sweetening power of sucrose is taken as 100, then the sweetening power of D-glucose is about 74. Buchanan points out that advantage can be taken of this lesser sweetening power to improve flavor. A grape beverage which had been manufactured with a concentration of 16 per cent of sucrose was found to be too sweet. The mere addition of acid could not alter this and made the beverage too acid. By using sufficient dextrose to make up 50 to 60 per cent of the total sugar content, the sweetness was reduced sufficiently without any reduction in the desired body of the beverage.

### Artificial Sweeteners

Artificial sweeteners give the sweet taste required in "dietetic" soda pop without adding food value but they do not contribute a "body" effect.

### Acid

The amount and kind of acid used in a carbonated beverage often have a marked influence on the flavor of the beverage.

First, it is to be noted that beverages can be divided into two large groups depending upon their acid concentration. In the first of these are placed the group of carbonated nonalcoholic beverages known as the acid-type soft drinks. Cola-flavored beverages, ginger ales, and fruit-flavored beverages belong to this group. In the second group are placed the nonacid-type soft drinks to which root beer and sarsaparilla belong.

Actually both groups have an acid reaction but the pH of the acid-type is considerably lower. For instance, colas are around 2.3, ginger ales 2.6-2.8, fruit-flavored

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soft drinks 2.6-3.5 as compared with 4.5 for sarsaparilla, 5.0 for root beer, 5.5 for cream (vanilla), and 5.7 for celery. Of course, these are not standardized values and different bottlers will have somewhat different values.

Second, the character of the acid used is of consequence to the flavor. The principal acids utilized by the soft drink industry are citric acid, lactic acid, tartaric acid, malic acid, and phosphoric acids. All of these are used in edible grades only. Citric acid is the acid that is characteristic of the citrus fruits. It is, however, the acid most commonly used in nearly all fruit-flavored beverages. It is also common to use tartaric acid in grape beverages for tartaric acid is the characteristic acid of grapes.

It is customary to use phosphoric acid as the acidulant of colas, sarsaparilla, and root beer. Citric acid is used in ginger ale formulations.

### Flavoring Materials

While both the sweetening agent and the acid do influence markedly the flavor of a given soft drink, the characteristic flavor results from the flavoring materials added. The principal flavors used come in the form of alcoholic extracts or solutions, aqueous solutions and emulsions, solutions of flavoring materials in glycerol and propylene glycol, and fruit concentrates. Soft drink flavor ingredients of an essential oil character often require extraction with alcohol from the source raw material. Water soluble flavoring components can be put up as aqueous solutions. When necessary because the water solubility is low, emulsions can be prepared or solutions in glycerol or propylene glycol can be prepared. Such emulsions or solutions avoid the use of alcohol. Concentrated fruit juices are used in preference to fruit juices themselves for on dilution with the carbonated water greater fidelity of fruit flavor can be obtained.

On a number of occasions I have discussed the various categories of flavoring materials and there is no need to repeat such classifications here. It is of importance, however, to point out in beverages which have country-wide distribution, the complete flavored sirup is often prepared at central plants and is distributed from such central locations to the bottling plant.

### Criteria

There are certain criteria that a flavor, whether prepared by a flavor manufacturer or by the beverage bottler, must meet. These are solubility, flavor fidelity, resistance to acidity, and noncontamination.

Possibly the most important criterion for a flavor for beverage use is that of solubility. Since this is an essential characteristic, it is often necessary to eliminate certain relatively water insoluble components normally present in a natural flavoring material like an essential oil before it can be used for particular beverage purposes. For instance, if a perfectly clear lemon or orange flavored carbonated soft drink is being manufactured, it is necessary to use citrus flavors in which the terpene concentration has been reduced. Terpeneless and sesquiterpeneless flavoring oils are in this category.

If cloudy type orange or other citrus beverages are being prepared then the elimination of terpenes and other insoluble flavor components is, of course, far less important.

An additional factor to consider is that if the flavoring is not completely soluble and a perfectly clear carbonated beverage is desired, it becomes necessary to filter the sirup or even the beverage and this adds an additional processing step.

### Flavor Fidelity

Since carbonated soft drinks and other beverages are in contact with the mouth for only a transitory period of time, the need for flavor fidelity or flavor identity is not great, certainly not as great as in the case of a product which stays in the mouth for some time as in the case of candy.

Indeed in the case of soft drinks or soda pop, one often does not desire a lingering taste, even a lingering taste of high fidelity, hence if such were present it would be a decided disadvantage to the beverage. The lack of need of flavor fidelity in soft drink flavors was exploited to such an extent years ago that the flavor of some beverages, notably raspberry had virtually no resemblance to the natural flavor. This "synthetic" taste was so widely accepted that soft drinks flavored with true fruit flavor were not popular.

In more recent years considerable progress has been made in this respect. Natural flavors have a much greater vogue and the use of "true" fruit flavors often give a competitive advantage.

### Acid Resistance

Since many beverages have relatively low pH, that is relatively high acidity, it is necessary that the flavoring components be resistant to decomposition attributable to the acid or to accelerated oxidation because of the acid.

### Noncontamination

It is most important that the flavoring of a soft drink contribute no contamination to the beverage because such beverages are generally not heat treated. When alcoholic extracts are used, particularly if the concentration of the alcohol is over 20 per cent it will have a preservative action on the flavor. In some flavors the acid concentration will be sufficiently high to reduce the danger of contamination. In the case of those beverages which are flavored with fruit concentrates that contain fruit pulp and other insoluble matter the problem becomes more complex and in some instances sodium benzoate must be used.

### Other Criteria

Resistance to destruction by heat or thermal hazard is generally not an essential for a beverage flavor for seldom are soft drinks heat treated.

The possibility that the flavor will be inadequate because of dilution is also not too important for generally beverage flavors are made sufficiently strong that dilution is not a factor. This, however, is not true if unconcentrated fruit juices are used, for in such instances too

# Our Fragrance has WINGS...

Ordinarily, the average customer expends three *senses* before she spends one *cent* on a new *scent.*

First, she *hears* about it through some advertising media . . .

She *sees* the product offered on countless shelves, counters and window displays . . .

Her curiosity aroused . . . she will take the perfume bottle in her hand . . . and then (you guessed it) she will *smell* it.

Your fragrance sways her decision to *buy!*

Use Albert Verley's distinctive products to get your perfume "off the ground" . . . OUR FRAGRANCE HAS WINGS!

SEND FOR SAMPLE

*Albert Verley* and Company

**1375 EAST LINDEN AVENUE, LINDEN, N. J.**

21 East 40th Street
New York 10, New York

1018 S. Wabash Avenue
Chicago 5, Illinois

**MEFFORD CHEMICAL CO.**
**1026 SANTE FE AVE., LOS ANGELES 21, CALIF.**

- **Synthetic Aromatic Products and Organic Isolates**
- **Synthetic Flower Oils and Aromatic Bases**
- **Bouquets and Finished Compositions**

ALBERT VERLEY AND COMPANY

great dilution may diminish flavor strength beyond an acceptable degree.

The presence or absence of alcohol in the flavor has its greatest effect on the solubility of the flavoring materials themselves in the prepared flavor and sirup and in the final beverage. If alcohol is used the flavor will probably be more soluble.

It is clear that although the major factor in the flavor of a carbonated soft drink is the flavoring, other components such as the sweetening agent and the acid used have marked effects on the final effect produced by the beverage.

## Flavored Notes

In the November 1956 issue I discussed the topic of enzymes and flavors and in one section considered the work of Hewitt, Mackay and Konigsbacher of the Evans Research and Development Corp. of New York and Torsten Hasselstrom of the U. S. Army Quartermaster Research and Development Command, Natick, Mass. on what they termed "flavorese," that is, conversion enzymes which were able to reactivate normal flavors in blanched and processed vegetables.

The Evans Research and Development Corp. has announced that it has formed a new research group for further work in this type of enzymic investigation. This group will continue the study of the fundamental enzymic chemistry for the restoration of true flavor in processed foods by use of enzyme reactions on the latent flavor components of such foods.

The Bureau of Census reports that in 1954 the total value of all shipments of flavoring materials was $446,000,000. In this category the value of flavoring extracts, other liquid flavorings, and emulsions totaled $65,000,000; beverage bases totaled $38,000,000; and other flavoring products (not including chocolate) accounted for $159,000,000 including in this category flavoring sirups valued at $67,000,000.—M.B.J.

### Impressive Program for F. E. M. A. Meeting May 19-22 in New York

The Board of Governors of the F.E.M.A. approved a business program which is one of the most impressive ever planned for this Convention, which will be held May 19 to 22 at the Hotel Roosevelt, New York, as announced by Robert Krone of Fritzsche Brothers, Inc., Chairman of the Convention Committee.

Dr. Robert A. Osborn, Division of Food, Bureau of Biological and Physical Sciences of the Food and Drug Administration of Washington, D. C. has prepared a talk of vital interest to the members, entitled "The Establishment of Standards of Identity for Foods under the Federal Food, Drug and Cosmetic Act." The Convention Committee is extremely gratified to have prevailed upon Dr. Osborn to attend and talk upon this occasion.

Ralph E. Burgess, Chief Economist, American Cyanamid Co., Consultant Joint Economic Committee, U. S. Congress, and associated with the National Association of Manufacturers, will also be one of the featured speakers. He will review present and future business conditions and discuss some of the problems facing industry at the present time.

Another very fine and inspiring illustrated talk will be presented by Bernard L. Lewis of Bernard L. Lewis, Inc., on the subject of Vanilla publicity.

Dr. Bernard L. Oser of Food Research Laboratories, an authority on the subject of food additives, has prepared a paper which should be heard by all . . . "The Role of Flavor Compositions in the Current Food Additive Situation."

Arthur T. Schramm of National Aniline Division, Allied Chemical & Dye Corp. chairman of the committee representing color manufacturers in the endeavor to seek changes in laws to permit continued use of certified colors on a more realistic basis, has prepared a timely talk for the Association entitled "Certified Colors —Facts Behind the Headlines."

Other talks important to extract manufacturers will be "The Vanilla Bean Market," by Ray Schlotterer, executive secretary of the Vanilla Bean Assn.; the annual report of John Hall, executive secretary and general counsel of the F.E.M.A.; Report of the Scientific Research Committee by Dr. A. S. Wendt, Fred Fear & Co.; Report on Vanilla Research by Dr. George McNew of Boyce Thompson Institute; a Report on Organic Acids in Vanilla by R. Way of Crescent Manufacturing Co., and a Report of the Food Additive Committee by Harold Janovsky of Fritzsche Brothers, Inc.

While many fine speakers have been emphasized the splendid entertainment program should not be overlooked.

Starting Sunday afternoon, May 19, there will be the Suppliers' Hospitality Party; on Monday, following the business session, the Annual Golf Tournament at the Baltusrol Country Club, Springfield, N. J.; also a convention luncheon in New York for non-golfers, followed by an afternoon of interesting activity.

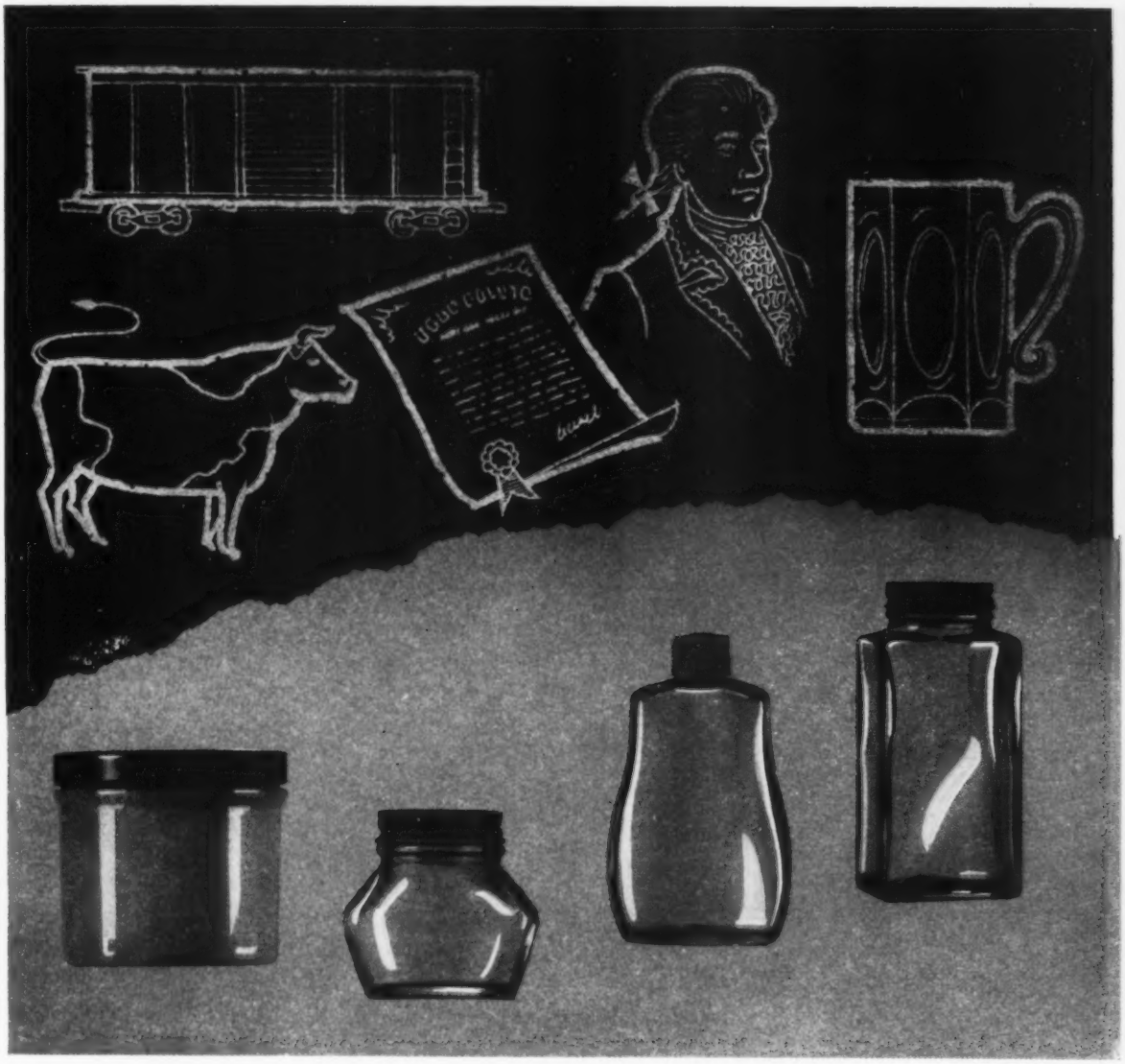
A delicious dinner and entertainment has been arranged for Monday evening at the Latin Quarter.

On Tuesday, the morning business session will be followed by an Association luncheon and the afternoon session by the President's Reception and Dinner-Dance.

The Chemists' Breakfast will be the first order of business Wednesday morning. This will permit an informal discussion of various technical aspects of the extract business with special emphasis on the F.E.M.A. research program. This will be followed by the closing business session of the association.

With all the current interest in standards, food additives and color investigations, not a single member of the association can afford to miss this well-rounded program which the committee has provided for this year's Convention.

The Convention Committee: Chairman—Robert Krone, Fritzsche Brothers, Inc.; Program—Dr. Arthur S. Wendt, Fred Fear & Co.; Golf—F. J. Lueders, George Lueders & Co.; Entertainment—John B. Mulligan, Don Gussow Publications, Inc.; Registration—William X. Clark, Sterwin Chemicals, Inc.



# . . . stock, stock, stock, stock, and stock

Some you eat, some you ride, some you invest, some you drink, some you used to wear — and one you can *bank* on — the beautiful Hazel-Atlas line of *Stock* Cosmetic Containers. Beautiful . . . yes! And more — they are also practical. H-A Opal Jars are straight, light — strong, white. Gleaming white opal glass hides air-pockets. Straight-sided for easy filling. Save time and expense with distinctive H-A "Deco-fired" Cosmetic Labels and designs for flint or opal — economically applied in one or more permanent colors at the time of manufacture.

Rigid quality-controls keep your H-A containers uniform in size, shape, clarity and color. They perform efficiently on the filling line and display your product at its best. You are sure of fast, dependable delivery during sales peaks and emergencies, served by H-A's nationwide network of glass plants and warehouses. Call or write your nearest H-A representative today.

*. . . glamour in glass*

**HAZEL-ATLAS GLASS** division of CONTINENTAL CAN COMPANY

WHEELING, WEST VIRGINIA

# News and Events

### F.T.C. Counsel Tells Cosmetic Career Women About Enforcement

How the Federal Trade Commission functions in regulating advertising was told in a spritely talk by P. G. Morehouse assistant general counsel for compliance of the F. T. C. to a large audience at the annual Men's Day meeting of Cosmetic Career Women in the Waldorf Astoria hotel, New York. April 3.

Cosmetic advertising questions arise from competitors, from consumers or by direct observation of the F. T. C. staff. Formal complaint procedure is employed only against a few "hard core" violators. Other procedures are used in correcting industry wide situations deemed illegal. These include trade practice conferences. Cease and Desist orders usually follow violations.

Commercial continuities of all radio and television advertising are received periodically according to schedule from individual stations and networks. The F. T. C. has liaison with the Federal Communications Commission over radio and TV advertising and concurrent jurisdiction with the Food & Drug Administration over false labeling.

A false advertisement is one other than labeling which is misleading in a material respect. The truth may be misleading when it is not the whole truth. The fact that it is literally true is no defense. Puffing is an exaggeration of qualities which an article really has—usually a matter of opinion and not susceptible of disproof.

Before composing any ad, an advertising agency should ask "What is the truth about this product?" and refuse to handle a product that cannot be sold honestly.

No statute of limitations runs against cease and desist orders except from the date of their violations and then it runs for five years. During that time a civil penalty suit for up to $5,000 for each offense may be filed in the U. S. district court. Each publication of the advertisement can be a separate offense. Since the institution of the compliance division judgments for such penalties for violations have exceeded $500,000. The F. T. C. is not looking for more and better violations—just more and better law observance in cosmetic and other advertising.

### New Sales Representative Joins Firmenich

Pierre T. Deleamont has joined Firmenich & Co. as sales representative. He is a graduate of the University of Geneva, in Switzerland, and has been active in the perfume industry in Switzerland and the U. S. for the past eleven years.

### Society of Cosmetic Chemists to Hold Semi-Annual Meeting

The Society of Cosmetic Chemists will hold its Semi-Annual Meeting, Friday, May 10, 1957, at the Hotel Commodore, New York City. The following papers will be presented at this meeting:

"Fundamental and Comparative Actions of Cleansing Creams," Albert R. Latven, Pharmacology Research, Inc.

"Some New Keys to Cosmetic Chemistry: 1956," by P. G. J. Lauffer

"Problem Solving" by Derek Till, Arthur D. Little, Inc.

"A New Water Soluble Polymer for Cosmetic Compounding," by Charles A. Dittmar, B. F. Goodrich Chemical Company

"Some New Considerations About the Chemistry of Acne," by Thelma G. Warshaw, Dept. of Dermatology and Syphilology, New York University

"A New Family of Amphoteric Surfactants: Fatty Amino Acid Derivatives," by D. L. Andersen, J. W. Opie and A. J. Freeman, General Mills, Inc.

"The Pushbutton Age," by A. R. Marks, Wheaton Plastics Company

### Croda Announces New Officers

F. A. S. Wood, chairman of the Board of Directors of Croda, has announced the following changes in officers. J. M. Cannon has been elected president and treasurer. K. F. Neulinger has been elected vice-president in charge of sales, and Miss Y. Perlmutter has been elected secretary of the company.

### Beefsteak and Baseball

A beefsteak dinner featuring motion picture highlights of the 1956 World Series was held by the Salesmen's Assn. of the American Chemical Industry at Toots Shor's Restaurant April 4th.

### Golf Outings Scheduled by SAACI

Five golf outings have been scheduled for 1957 by the Salesmen's Assn. of the American Chemical Industry it has been announced by SAACI president Vincent L. Rebak.

### L. A. Salomon & Bros. Celebrates 90th Year

Founded in 1867, L. A. Salomon & Bro. Inc. celebrated its nintieth year in March. The third generation Salomon (Henry G.) heads this firm.

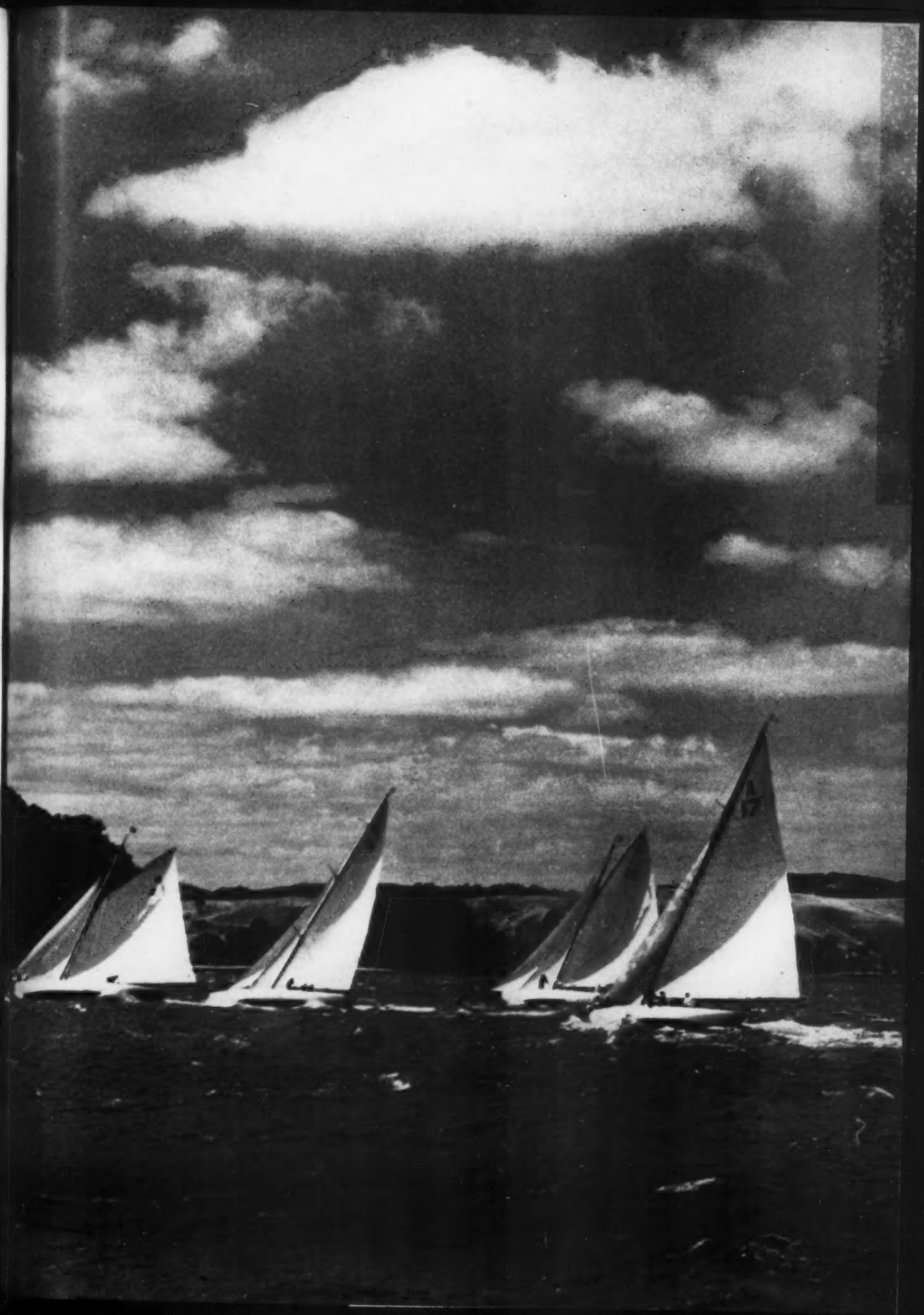
### Richard Hudnut in Luxurious New Quarters in New York

Richard Hudnut has opened executive sales offices and a luxurious new showroom named the DuBarry Salon de Beaute in a two floor wing of one of New York's most beautiful and distinguished buildings—7 E. 60th St. at Fifth avenue.

The entrance is through the famous French courtyard which has been a landmark for 65 years. DuBarry, Sportsman and Hudnut preparations are displayed. A feature of the opening was the introduction of a revolutionary refillable lipstick.

### American Cholesterol Products Adds Tech Services Director

The appointment of Henry F. Maso as director of technical services has been announced. Mr. Maso, formerly with Johnson and Johnson as Senior Research Chemist, will direct American Cholesterol's program of customer service and product formulation for the cosmetic and pharmaceutical industries.



# REGATTA

## A FRITZSCHE "EXCLUSIVE"

. . . *twelve* . . . *eleven* . . . *ten* . . . *nine*—seconds fade and tension mounts as each skipper jockeys his boat to be abreast the starting line a split second behind the racing steward's gun. Distance, speed, position, timing—*four* . . . *three* . . . *two* . . . *one*—and they're off! . . . sails bulging, pennants flying, and with each forward plunge, a dripping bow sends showers of cool, clean spray to whet the true yachtsman's insatiable appetite for competition—for the keen, thrilling, unmatched competition of a sailing regatta. Because of its dash and exciting color, because it suggests a virile breed, we have appropriated the name REGATTA to identify another fine FRITZSCHE "EXCLUSIVE"—this one, a masculine fragrance for use in men's colognes, toilet waters, shave lotions and deodorants. Companion fragrances for other types of men's toiletries are also available. REGATTA has a real out-of-doors quality—a manly appeal, but attractive to the ladies, too. It contains elusive woody notes and refreshing citrus nuances, blended with consummate skill by our creative perfumers. Discreet floral characters round out this composition to give it added appeal for continuing masculine use. Its scent is never cloying nor oppressive, and we recommend it strongly as an odor most appropriate for today's trend in male fashions. If you're planning a line of men's toiletries, we hope you'll consider the desirability of REGATTA for its fragrance.


CREATORS of MADE-TO-ORDER FRAGRANCES for PERFUMES, TOILETRIES and COSMETICS

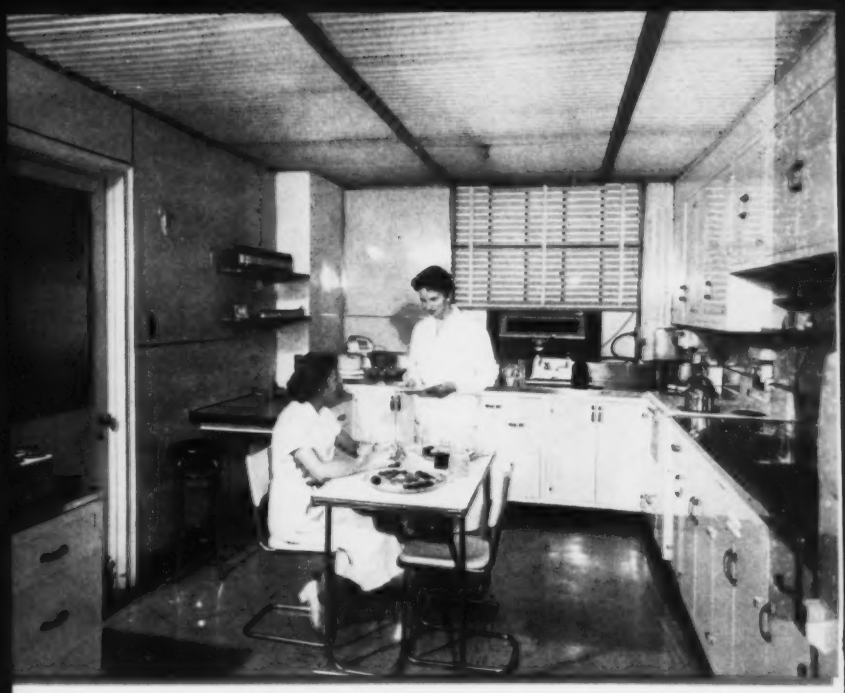
ODORANTS and DEODORANTS for INDUSTRIAL and TECHNICAL USE

SUPPLIERS of AROMATIC CHEMICALS, BASIC PERFUME and FLAVOR RAW MATERIALS

FRITZSCHE Established 1871 Brothers, Inc.

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES and *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, St. Louis, Missouri, Montreal and *Toronto, Canada and *Mexico, D. F. FACTORY: Clifton, N. J.



A MAJOR part of our business has to do with the correct use of flavors. Once an account has been established and proper flavorings have been decided upon, this business becomes more or less routine. But initially the servicing of a potential flavor customer often entails sample batch testing on a rather extensive scale. This work is performed in our immaculately clean, modern, air-conditioned Experimental Food Laboratory above, under conditions scaled down but similar to carefully controlled production-line techniques. Through these facilities we are able to prepare, test and evaluate not only our own flavoring materials but the corresponding offerings of our competitors. We are also able to prove both to our own satisfaction and to that of our prospective account precisely what effects can be produced with our materials, and what the comparative costs and advantages will be. Our Experimental Food Laboratory is truly an indispensable part of our Flavor Division's operation.

**FRITZSCHE** *Established* *1871*

*Brothers, Inc.*

**PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.**

BRANCH OFFICES *and* *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, †Chicago, Illinois, Cincinnati, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, St. Louis, Missouri, Montreal and* *Toronto, Canada and *Mexico, D. F.* FACTORY: *Clifton, N. J.*

# IF I DON'T LIKE IT, I WON'T TAKE IT, SEE!

Rebellion, once it starts, is often difficult to curb. The rebellion against taking needed medicinal therapy which sometimes starts at an early age, can be largely avoided by making a child's first medicine-taking experience a pleasant one. Drug manufacturers can see to that by making sure every proprietary, every tonic, every ethical drug identified by their name is palatable and easy-to-take. To such medicines the baby's reaction will be a happy one, and getting off to the *right* start at this early age is really important. No drug manufacturer should attempt to market a new product until its flavor has been favorably judged by a competent tasting panel. Should disagreement as to its palatability then arise, we shall be happy to have a sample of that product submitted for possible taste improvement by our own pharmaceutical flavor specialists . . . in confidence, of course, and without obligation. Pioneers in this field comprise our staff and we believe their suggestions for your product's flavor may well indeed prove valuable. Why not contact us?

**For GOOD TASTE**
**in Pharmaceuticals *Consult*.....**

**FRITZSCHE** *Established* 1871
*Brothers, Inc.*

**PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.**

BRANCH OFFICES *and* *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, St Louis, Missouri, *Toronto, Canada and *Mexico, D. F. FACTORY: Clifton, N. J.

### John H. Muller Named Vice President of Moore Publishing Co.

John H. Muller, who has been associated with the Moore Publishing Co. for the past seven years, has been named a Vice President of the company. Mr. Muller has also been appointed Business Manager of the *American Perfumer & Aromatics* and takes over the direction of that publication.

### Edward Sagarin Addresses Brooklyn College Chemistry Society

Edward Sagarin spoke before Brooklyn College Chemistry Society March 6, outlining the repercussions that the synthesis of citral, geraniol, linalool, citronellol and other oxygenated terpenes may have on perfumery.

### Felton Announces Development of Coffee Flavor

A new imitation coffee flavor (Felcafe 89) said to be of remarkable fidelity has been developed by Felton Chemical Co. for use as flavoring ingredient in hard candy, ice cream, beverages etc.

### National Chemical Credit Assn. to Hold Afternoon Meetings

Members of the National Chemical Credit Assn. Eastern Division have voted to hold monthly meetings in the afternoon.

### Meri Jo Announces Officers

The newly formed Meri Jo Corp. of Tampa, Florida has announced these officers: J. B. Knight, Jr., president; Malory B. Frier, secretary; Francis M. Moore, director; and Dr. Victor A. Rule, director.

### H. Frank Maurer Speaks Before Chemical Assn.

"Selling To Large Chemical Corporations—The Buyer's Point of View," was the subject of H. Frank Maurer's address before the March 12 meeting of the Chemical Industry Association in New York City.

### Mennen Co. to Launch Contest

The Mennen Co. will launch a nationwide $100,000 Good Health and Good Grooming Consumer Contest on May 1. In addition to the consumer contest, Mennen will award $25,000 in prizes in a similar contest for retailers.

### Nesbitt Announces New Dispenser

N. C. Nelson, vice-president of Nesbitt's announces that his company has introduced a new plastic Melamine continuous flow dispenser made of durable plastic, claimed to be free of acid corrosion, easily cleaned and low in cost.

**TARTAN BILLBOARDS HAVE TAKEN TO THE ROAD**

The newest gimmick in ambulatory services comes from McKesson & Robbins, whose billboards advertising their tanning lotion have been reproduced exactly on truck sides delivering Tartan to distributors in Greater Miami area.

**BRECK COIFFURE CAVALCADE**

Shown at the television studio following the presentation of John H. Breck Inc.'s pageant of hairstyles and history of cosmetics entitled "Coiffure Cavalcade" seen over WWLP, Springfield, (Mass.) are left to right, Tom Colton, M.C. and Producer for the "Western Massachusetts Highlights" show; James Anderson of John H. Breck Inc., Commentator; models representing hairstyles and fashions for 1914, 1860, 1750, 2500 B.C.; the Breck Golden Girl wearing the "Golden Dream" coiffure; and Edward J. Breck, President of John H. Breck Inc.

### Dr. Hubert Fraysse to Advise on Latest Trends in Fine Perfumery

Dr. Hubert Fraysse, head of the perfume speciality house, Synarome S.A.R.L., will visit the United States during the first fortnight in May. Dr. Fraysse will arrive in New York from Paris on April 27 and on May 1, will be the guest of honor at a reception at the Hotel Pierre.

This visit by Dr. Fraysse will be the first time in half a dozen years he has had the opportunity to consult with his many American friends on their home grounds. It is expected that he will not only bring detailed word of the latest trends in modern and neo-classic developments in fine perfumery, but will also afford the cognoscenti of American perfumery first evaluation of Synarome's new creations. As such, much significance has been attached to the effects of Dr. Fraysse's visit on coming trends of American perfumes.

### Celon Co. Moves General Offices

The general offices of the Celon Co. have been moved from Madison, Wisc., to the Medical Arts Building, Muscatine, Iowa. The telephone number is AMherst 3-3611.

### Rayette Joins RCA In Promotion Tie-in

Rayette, Inc. and RCA-Victor recently joined in an advertising and promotional tie-in to introduce three new shades of Rayette DreamColor Rinse. Directed toward beauty salons, the contest will award prizes of 21-inch RCA Victor Compatible Color television sets, plus two hundred other awards. The effectiveness of interior and window displays featuring the new Rayette products will be the basis on which the prizes are awarded.

Every salon purchasing a Rayette DreamColor Deal between March 1 and August 31 will receive an entry blank, which is to be returned with a snapshot of the decorated salon window or interior display. The deal includes a display kit with extensive promotional material.

### Chicago Perfumery, Soap and Extract Assn. Announces 1957 Officers

F. F. LaSarre has been elected president of the Chicago Perfumery and Extract Assn. The other officers installed are: Vice President—R. B. Harcombe; Secretary—W. A. Martin; Treasurer—J. Baldwin.

### National Fruit and Syrup Assn. Announces Convention

The National Fruit and Syrup Manufacturers Assn. has announced that its 40th annual convention will be held in New York City, May 17 and 18, at the Hotel Roosevelt.

### Maromay Wins Art Director's Award

Maromay, Inc. recently won the Art Directors of Los Angeles' award for their "psychological" advertising campaign.

### Pierre Harang and Dr. Robert P. Fischelis Address Druggists' Assn.

Pierre Harang president of the Toilet Goods Assn. and Dr. Robert P. Fischelis addressed the Federal Wholesale Druggists' Assn. at the Hotel Statler March 7. Mr. Harang spoke on "Merchandising—Pros and Cons" and Dr. Fischelis on "Price of Professional Prestige."

### QUEEN OF THE LADIES-IN-WAITING

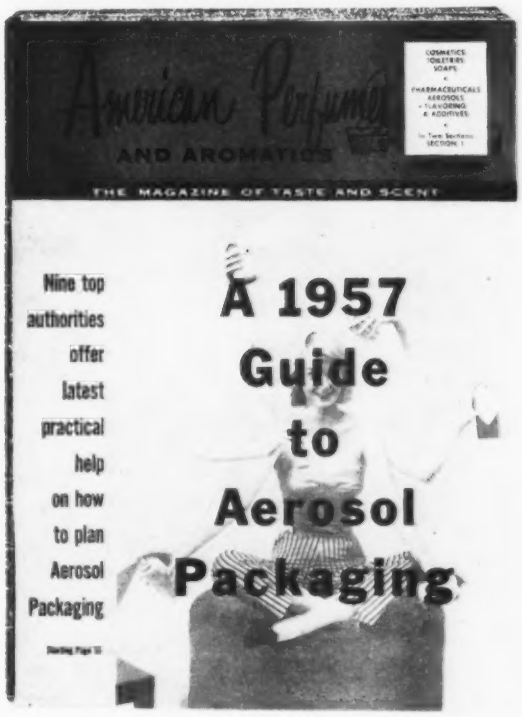
Of three thousand candidates in the New York City Area, Mennen Baby Products selected Mrs. George Watson of 30 Grand Avenue, Staten Island as "Queen of the Ladies-in-Waiting." Mrs. Watson is expecting her ninth child, and was chosen for this honor because of her "healthy attitude toward child-birth" said William G. Mennen, Jr., executive vice president of Mennen Baby Products, sponsors of the National Lady-in-Waiting program. Mrs. Watson was crowned by Bob Russell following her appearance as a special guest on "Stand Up and Be Counted" (CBS-TV), the program on which Mr. Russell is host. Present for the coronation were Mrs. Watson's family—Bernadette, age 15½; George, age 12½; Cathy, age 11½; Robert, age 10; Joe, age 9; Alice, age 6; Tommy, age 5; Paul, age 3; and Mr. Watson, father of the children, a Staten Island fireman.

# QUESTION:

**What one publication is devoted to the related cosmetic, soap and flavor industries in the United States and Europe?**

# ANSWER:

**largest**
**most**
**concentrated**
**paid circulation**
**"audience"**
**in the field**


American Perfumer
AND AROMATICS
THE MAGAZINE OF TASTE AND SCENT
Nine top authorities offer latest practical help on how to plan Aerosol Packaging
A 1957 Guide to Aerosol Packaging

AMERICAN PERFUMER & AROMATICS is basically a technical cosmetic publication, publishing more technical articles on formulation, research, etc. than any other publication. It is editorially slanted to help the key men who originate, produce and sell the product. Service to readers extends beyond the fragrance aspect into formulas, values of components, and exploring new materials and ideas.

It publishes personal and trade news as well as new products and processes. A Monthly "Market Report" summarizes price fluctuations of raw materials and highspots changing market conditions affecting supply and demand.

**A MOORE PUBLICATION**

American Perfumer
**AND AROMATICS**
48 West 38th St. • New York 18, N.Y.

## Cosmetic uses of Polyvinylpyrrolidone (P.V.P.)

At the fifth meeting of the Session of the Society of Cosmetic Chemists of Great Britain held at the Royal Society of Arts, I. Greenfield, B.Sc., A.R.I.C., gave a well-illustrated lecture on "Polyvinylpyrrolidone, Its Manufacture, Properties and Use in Cosmetics." The organic chemist, he said, had presented us with an exceptional achievement in converting the unpromising raw materials, limestone, coke, water and air into a substance which was employed during the Second World War as a replacement fluid for natural human blood. The chemical engineer had followed with the notable feat of putting a difficult synthesis upon a commercial basis and thus making polyvinylpyrrolidone available for industries which could find employment for it. Mr. Greenfield gave interesting details of these developments. In the manufacture the final stage was one of polymerisation and the point to which this was carried naturally affected the suitability for particular uses. It had been found possible to prepare polymers with molecular weights ranging from about 10,000 to 100,000; the most generally useful products were found in the lower part of this range, but the more highly polymerized grades might find application as thickening agents, although it was clear that the complicated synthesis would bring the cost to prohibitive limits for general thickening purposes.

Before describing some established and other potential uses of P.V.P. in cosmetic preparations, Mr. Greenfield suggested that although it was not known to have any harmful physiological effects, it would be desirable to investigate the possibility in any new application by the usual methods.

The chief use of P.V.P. in the past had been in hair lacquers and wave sets, the reported sales of P.V.P. aerosol sprays in 1955 in U.S.A. being between 35 and 38 million package units, some 70% of the hair-spray output of that country. P.V.P. was described as possessing special advantages over the older lacquers; solubility in volatile solvents and in water gave easy application, simple re-setting by using a damp comb or brush and easy removal by shampooing; formation of complexes with dyestuffs combined with substantive action on the hair allowed of temporary tinting, afterwards removable by shampooing; slight hygroscopicity kept the hair manageable. The nature and concentration of the plasticiser and the concentration of P.V.P. required modification according to hair thickness, degree of crispness desired and the relative humidity of the air of the locality in which it was used.

The effectiveness of P.V.P. as a pigment binder and dispersing agent had led to its use in liquid make-up, pancake and compressed powder make-up and in mascara. The fact that P.V.P. was substantive to skin and hair suggested that it would be worth while examining its effect in shaving creams, hair creams and shampoos. Incidentally it was a foam builder and stabiliser.

Mr. Greenfield deprecated extravagant claims for P.V.P. Some of its applications had become established; others he had mentioned, he commended as worthy of careful examination by the cosmetic chemist. A word of warning was given that it was important to examine the compatibility of P.V.P. with any perfume it was proposed to include in any formulation. Suppliers of perfume compounds were aware of the problem and were in a position to advise. The property of forming complexes with perfumes had led to investigations now in hand in this country and overseas on the fixative action of P.V.P. in perfumes.

## NEW SCENTS FROM THE AROMA FACTORY ALONG THE ALA MOANA

C. H. Brown, "Browny of Honolulu" as he's known in the Hawaiian Islands, was featured on the cover and in the opening article of a recent issue of Hawaiian Holiday, the Sunday magazine section of the Honolulu Advertiser. Titled, "Aroma Factory Along the Moana," the article traces his career of Mr. Brown, who is a cosmetic chemist, electronic engineer and master of various other skills, from his home in Detroit to his present occupation as owner of a large factory in Honolulu.

Browny, as he is now almost exclusively known, began in Honolulu ten years ago while waiting for passports to China. To pass the time he made perfume on the stove in the small apartment that he and his wife were sharing. His first commercial calls with his product brought success, and he abandoned his idea of going to China.

The factory that the team (Mrs. Brown is universally known as Straussy) now own and operate produces 220 items for Hawaii and the mainland. Browny himself designed the variety of packages, machinery to handle them and the equipment for finding new scents.

Also developed by him is the technique of stuffing flowers into his perfume bottles. Unlimited patience and nearly a thousand orchids went into the perfection of the process. Now workers ram six inches of lei into a large bottle, and get tiny orchid specimens into the quarter-ounce and dram-size bottles.

The company now has five scents—Orchid, White Ginger, Pikake, Carnation and Lani—for its perfume, cologne, bubble bath, shaving lotion, suntan preparations and other products. A sixth, to be called Plumeria, is on the way.

Straussy, whose desk flanks that of her husband in their scented office, is an efficient and lively brunette, who is instrumental in the operation of the Aroma Factory Along the Ala Moana.

## Dr. Friederich

Dr. Friederich of the Deutsche Gesellschaft fur die Aesthetische Medizin und Ihre Grenzgebiete has announced a meeting for June 13-17, 1957.

Leo Bertisch

Samuel Rubin

## Leo Bertisch to Head Drive

Leo Bertisch has again accepted the chairmanship of the drug, perfume, cosmetic and allied industries' 1957 drive for the United Jewish Appeal it was announced by Samuel Rubin.

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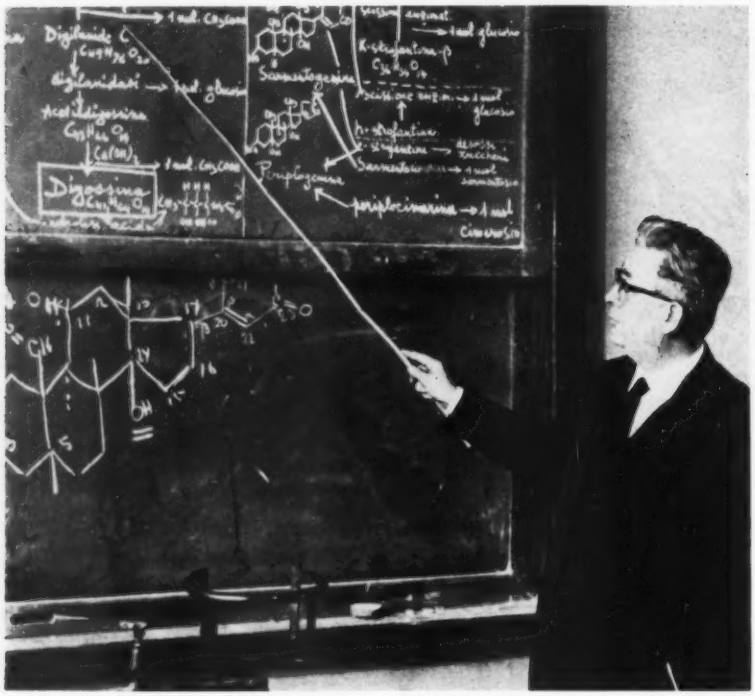
**AWARDED CROSS OF CHEVALIER OF LEGION OF HONOR**

For his "devotion to France" and aid in creating and co-sponsoring for five years the Chair of Philosophy at Hunter College and for the return to the United States of Professor Jacques Maritian, Sylvan Oestreicher was awarded the Cross of Chevalier of the Legion of Honor of the Republic of France.

The presentation was made by Jean de Lagarde, Minister Plenipotentiary and Consul General of France, at the Consul's New York office.



**GIORDANO GIACOMELLO HEADS RESEARCH GROUP**

Professor Giordano Giacomello is guiding a new cooperative research program at the University of Rome. Supported by the Colgate-Palmolive Co. through its Italian subsidiary, the program is devoted exclusively to research in chemistry.

### T. M. Duché Celebrates 100th Anniversary

The firm of T. M. Duché & Sons will be celebrating its 100th anniversary this year. The business was originally established in London in 1857, and in 1879, the founders opened an American branch. In a recent announcement to all its customers and suppliers, Duché expressed appreciation for the patronage and confidence which brought about the expansion of its operations and made the anniversary possible.

### Polak's Develops Watermelon Flavors

Polak's Frutal Works has developed a line of imitation Watermelon flavors for syrup, ice cream and candy manufacturers.

### Millmaster Will Represent Lever Bros. In Glycerine Sales

Millmaster Chemical Corp. has undertaken the sale of glycerine as representative of the industrial sales department of Lever Bros.

### 22nd Annual Convention of Toilet Goods Association

The 22nd annual convention of The Toilet Goods Association will be held on May 7, 8 and 9th at New York's Waldorf-Astoria. The overall theme of the 3-day event, "Personality-Key to Future Profits," will be expressed in the keynote address at luncheon Tuesday, May 7, by Otis L. Wiese, Editor and Publisher of McCall's. Taking as his topic, "The Changing Personality of Our Times," Mr. Wiese will set the background for the entire convention by exposing the underlying forces that shape the personality of America today and strongly affect the toiletries market.

This year's convention which is chairmaned by J. I. Poses of D'Orsay Sales Corporation and his Program committee has planned a program balanced to meet the problems of both large and small manufacturers. The three business sessions will be devoted to panel discussions of packaging, distribution and promotion, and the manner in which each of these can help to build the unique personality of a particular product.

In announcing convention plans, Mr. Poses points out that "an unusual feature of the three panel discussions is the use of a 'jury box' filled with a group of other distinguished representatives of the toilet goods industry, a different group for each subject. Members of the 'jury' will question the speakers on each subject. Seventeen industry leaders will serve on these 'juries' bringing to the convention 'a greater wealth of speaking talent than it has had in the past' "

Highlights of the schedules convention include:

Tuesday morning, May 7—Annual address by the President, Pierre Harang, Vice-President of Houbigant Sales Corporation; Report of Executive Vice-President by S. L. Mayham; Report of

Treasurer; Election of Officers and Directors.

Tuesday afternoon, May 7—Speech by Florence Goldin of Grey Advertising, who will develop the theme "What Women Want in a Toiletries Personality"—relating the problem that today's manufacturers face in selling the market described by Otis Wiese.

Tuesday afternoon, May 7—"Personality and Your Package." Chairman: Jack Cawley, Panel Members: Kay Brown, Yardley of London, Inc.—"Packages and Women"; Donald Deskey, Package Designer—"Product Personality in Your Package Design"; Lloyd Stouffer, Modern Packaging—"New Packaging Trends."

Wednesday morning, May 8—"The Changing Personality of Toiletries Distribution." Chairman: Jean Despres, Coty, Inc. Panel Members: Ade Schumacher, Liggett-Rexall Drug Stores—"Changing Personality of Today's Drug Store"; Dr. Herman Nolen, McKesson & Robbins—"Changing Personality of the Drug Wholesaler"; Joseph Handleman, Handleman Drug Company—"Changing Personality of Today's Super Market"; Phillip Schindell, Limited Price Variety Association—"Changing Personality of the Variety Store"; John Strauss, R. H. Macy—"Changing Personality of the Department Store."

Wednesday afternoon, May 8—"Building a Product Personality Through Promotion." Chairman: Donald Bryant, Warner-Lambert Pharmaceutical Co., Inc. Panel Members: Donald Frost of Bristol-Myers Co., and Norman Mack of Peck Advertising—"Personality in Advertising"; Janet Myers, Bourjois, Inc.—"A Personality for Tomorrow."

The Program committee members are as follows: J. I. Poses, *Chairman*, of D'Orsay Sales Corp., Charles T. Lipscomb, Jr., of the J. B. Williams Co., John A. Cawley and George Kaempkes of Pacquin, Inc., Herbert Storfer of Parfums Corday, Inc., Albert Mosheim, Jr., of House of Tre-Jur, Inc.

THURSDAY, MAY 9—MEETING OF THE SCIENTIFIC SECTION, under the direction of Chairman of the Section: Orville Davenport, Avon Products, Inc.

*PROGRAM*

Interference of Non-Ionic Emulsifiers with Preservatives V Chromatographic and Chemical Investigation by Constance Hall and Maison G. deNavarre, Cosmetic Laboratories, Inc., Division of Beauty Counselors, Inc.

The Measurement of Consumer Reaction to Fragrances by Noel Schwartz and Dean Foster, U. S. Testing Laboratory.

The Antibacterial Activity of the Aluminum Salts by Irvin H. Blank, *Ph.D, Ruth K. Dawes, *B.S. and Marjorie Moreland, **M.S.

*Department of Dermatology, Massachusetts General Hospital, Harvard Medical School.
**Summit Diagnostic Laboratories, Summit, N.J.

Ethanolamines in Topical Preparations by John H. Draize, Francis X. Wazeter and Elsie A. Kelley, Division of Pharmacology, Food and Drug Administration, Bureau of Biological and Physical Sciences, Washington, D. C.

Election of Vice-Chairman.

LUNCHEON: Annual Cibs Award by George Kaempkes, Pacquin, President of Cibs, to authors of best paper published in the Proceedings of the Scientific Section during 1956.

Pitfalls in Evaluating the Safety of Cosmetics by Bernard E. Conley, Ph. D., secretary, Committee on Toxicology, American Medical Association.

The Analytical Chemistry of Silicones in Cosmetics by A. Pozefsky and M. E. Grenoble, General Electric Co., Chemical and Metallurgical Division, Silicone Products Department.

Practical Measurements of Epidermal Emolliency and Emollient Penetration by Herbert J. Spoor, Ph. D., M. D.

*Mala Rubinstein*, Director of the Helena Rubinstein Salons, and niece of Madame Helena Rubinstein, was the featured speaker at the Texaco Women's Clubs at their meeting on Friday, April 12th.

*Glenn W. Johnston* has been appointed Product Manager of Williams Shaving Products. Mr. Johnston joined the Williams Company in February. His experience includes more than twelve years with McKesson & Robbins, in various executive positions.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Mr. Ivan Makowsky, President Directeur General of the Napoleon, who has for years been connected with the Klaguine interests including Charabot in Grasse, will be pleased to hear from you and offers the hospitality of the hotel and the assistance of his staff.

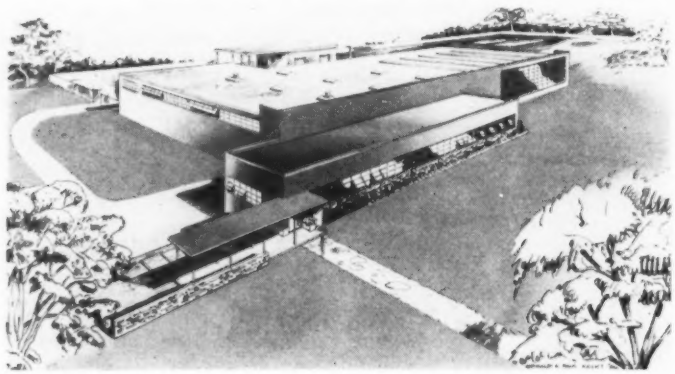
•

*(It is advisable to make your reservations well in advance)*

## HELENA RUBINSTEIN HONORED BY HOSPITAL

At a recent ceremony at New York Hospital, Madame Helena Rubinstein was honored by the Institution for her generous contributions to its Childrens Blood Foundation. Her name was engraved in a stone wall of the hospital in appreciation of her donations. With Madame Rubinstein above are, left to right: Dr. Carl Smith, head of Cornell Medical School, Mr. Harold Weill, Dr. August H. Groeschel, Dr. Joseph C. Hinsey, Mr. Laurence G. Payson and, next to the beauty authority, Dr. Samuel Z. Levine.

## "AMERCHOL" COMPLETES NEW PLANT



American Cholesterol Products, Inc. has announced the completion of its new plant and laboratory in Edison, N. J. The new plant includes 5000 sq. ft. of laboratory and office section adjoining a 23 ft. high, single-story manufacturing building. An additional building will be used for solvent storage.

### Almay Making News by Subtraction of Ingredients

In striking contrast to the trend Almay Cosmetics are making beauty news based on the subtraction of ingredients. The ingredients screened out are more than 55 skin irritants. The cosmetics are manufactured by Schieffelin & Co., America's oldest drug house with a history dating back to 1794. Almay cosmetics, it was pointed out by William J. Schieffelin III, vice president, claim the distinction of combining medical approval by skin specialists and fashion approval by complexion conscious women. Almay cosmetics are certified as hypo-allergenic which means, he pointed out, that they are free from all known sensitizers. The foregoing facts were emphasized at a meeting April 5 when the company launched a half million dollar promotion campaign.

## OBITUARY

### George Kremer, Sr.

George Kremer, Sr., founder of Roux Distributing Co., died March 2nd.

### Robert L. Lund

Robert L. Lund, former executive vice-president and director of Lambert Company, New York, and director of Lambert Pharmacal Company, St. Louis, Mo., died March 9 in the latter city. He was eighty-one years old. Mr. Lund was president of the National Association of Manufacturers in 1932 and 1933, and board chairman in 1934 and 1935.

### Dr. Alexander E. Katz

Dr. Alexander E. Katz, one of the foremost food flavor and perfume chemists, died March 18 following a heart attack. Dr. Katz was born in Odessa, Russia in 1887.

He was a graduate of the Universities of Kharkov, Lausanne and also Columbia University. He came to the United States in 1908 after having taken over the reins of Ritter & Co., which was established by his father, M. Jacob Katz, in 1876.

Dr. Katz was responsible for many of the latest developments in the aromatic and fine chemical field and was the pioneer in bringing the basic flavor and perfume industries to the Pacific Coast and, as such, established what is today the only basic aromatic, flavor and perfume plant west of the Mississippi.

He worked with the Alcohol Tax Unit to establish standards on alcoholic extracts from 1917 to 1920. He was the first chairman of the Scientific Research Committee of the Flavoring Extract Manufacturers Assn. During the war years, Dr. Katz served with the Office of Civilian Defense as consulting chemist in the detection of poisonous gases, and in 1947 he worked with the State of California in the determination of the possibilities of development of a varied essential oil industry in California.

As president of F. Ritter & Co. and Ritter-International, Dr. Katz made numerous trips abroad for the purpose of conducting surveys as well as sales, and also to help the industry in various countries by sharing his techniques. He was considered more of a friend than an employer by all those who worked with him and he leaves a host of friends throughout the industry.

His hobbies, other than creating new products, were watch-making and photography.

Dr. Katz is survived by his wife, Isabelle, his two sons, Leonard and Allan and four grandchidren.

# SPOTLIGHT News...

**Lentheric's executive line-up** now corresponds to the executive line-up of its new parent company, Helene Curtis Industries. Williard Gidwitz is president; George Factor is executive vice president; and all top marketing officials have been replaced. Raymond K. Myerson is general sales manager. J. J. Galietto, formerly with Toni Inc. is his assistant and Miss Lynd Boland is brand manager for Lentheric. The Lentheric plant in New Jersey has been sold and all production has been moved to Chicago.

**A bacteriostatic chemical** said to be capable of inhibiting the growth of odor causing bacteria and of molds in rubber, plastics, paper, leather and fabrics offered by Sanitized Sales Co. of America is to get a million dollar promotional push this year. The product is licensed to manufacturers of various products.

**For its 18th consecutive year** Tussy Cosmetiques will run its half price sale on Tussy Cream Deodorant and its second annual sale on Tussy Stick Deodorant from April 25 through June 1. The dollar sizes of both will retail at 50¢.

**A new cream deodorant,** Hush, and Crystal Clear White Rain, a new shampoo have been launched by the Toni Co. Hush is the company's first deodorant product and is another step in its diversification program.

**A boudoir size of Noxema** in a package designed for dressing table use has been launched by Noxema Chemical Co. It contains 6 oz. of cream.

**Cosmetic excise tax collections** for the quarter ended December 31, 1956 were $21,296,000. In the same period in 1955 the total was $18,060,000.

**Sales of Helene Curtis Industries** for 1956 were $42,090,163. Sales in 1955 were $27,750,989. Willard Gidwitz, president, states that the company is now permanently on a sales level of better than fifty million dollars annually.

**Sales of Warner-Lambert Pharmaceutical Co.** including unconsolidated foreign subsidiaries in 1956 aggregated $153,000,000.

**Sales of $1,888,000,000** were made by E. I. duPont de Nemours & Co. in 1956.

**Peppermint flavored postage stamps** are being sold by the West Germany Postal Ministry. Other flavors are to be added.

**The average man is less susceptible to dishpan hands than the average woman** according to tests at the Yale University School of Medicine.

**Postal rates may go up soon.** The Eisenhower administration has completed its draft of the postal rate program. It provides for a 4¢ letter rate; a 7¢ airmail rate and a 5¢ rate on airmail postals; a 60% increase for second class mail in four annual 15% steps; and a 2½¢ rate for bulk third class mail also in two annual steps with a 2¢ bulk rate the first year and an additional ½¢ increase a year later. Congress is expected to act on the bill this session.

**The addition of any flavoring agent** to a drug without a physician's prescription is prohibited in a bill introduced in the New York state legislature.

**To bring instant cooling relief to hot tired feet,** Foot Light, which contains a deodorant to keep the feet sweet will be launched by Max Factor & Co. May 1. The new product is packed in a 5-ounce aerosol spray can, so designed that it may be used in an upright or an upside down position for easy spraying. It will retail at $1.25 per can.

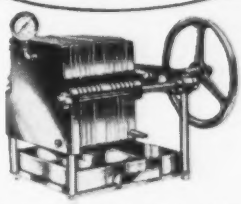
**Many more products may now be packaged in aerosols** because of a new emulsifier development called Emcol 14 according to the Emulsol Chemical Corp. With it, the company states, emulsion formulations using fluorinated hydrocarbon propellents, create desirable spray with minimum foaming and container corrosion. The new emulsifier it is added assures a satisfactory sprayable emulsion system containing water-soluble products making formulations practical for many products with characteristics suitable for aerosol packaging.

**A two-phase liquid to normalize both dry and oily skins on contact** called Liquid Asset has been launched by Revlon Inc. The company states that it took five years of work by its chemists and 23 ingredients to produce the product.

**A new method of packaging** called Thermo-Stik which is claimed to create a high speed, sift proof carton without over-wraps, inner-wraps or other packaging components has been developed by the Lord Baltimore Press and three machine companies. Thermo-Stik utilizes a highly viscous, extremely rapid setting thermoplastic adhesive applied to a specially cut seal-end construction carton, it is stated. Seeping into all cracks in the folds, the adhesive sets as it cools creating a sift-proof closure thus cutting unit costs by eliminating the need for double packaging.

**Sales and earnings of Chas. Pfizer & Co.** last year were the highest in the company's 108 year history. Consolidated sales were $178,362,196. Net earnings were $18,253,979.

**For FILTERING and FILLING**



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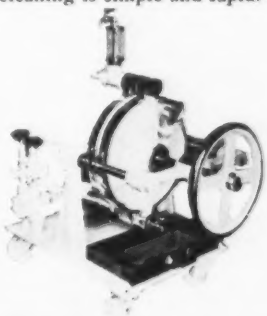
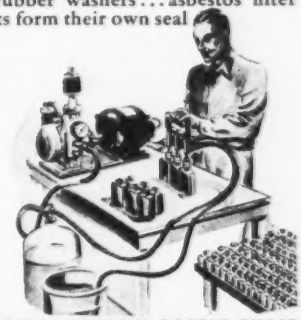


**MODEL EBW** – This filter is recommended for small batches where filter aid is required. Design eliminates need for rubber washers . . . asbestos filter sheets form their own seal



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# PERSONALITIES

**Dr. Alfred E. Brown** has been appointed Director of Research of Harris Research Laboratories, Inc., Washington, D. C. He has been most active in

Dr. Alfred E. Brown

research and development activities involving protein fibers such as hair and wool in the cosmetic, textile and allied chemical fields.

**Edward A. Bush,** sales manager of Dragoco Inc. recently paid a visit to the parent plant at Holzminden to become better acquainted with the operations of Dragoco and to obtain details on new products.

**Paul L. Kohnstamm** was elected president of the 107 year old concern of H. Kohnstamm & Co. at a recent meeting

Paul L. Kohnstamm

of the Board of Directors, succeeding Louis J. Woolf. Mr. Kohnstamm was formerly Secretary of the corporation and a member of the Board of Directors.

**Dr. Milton Harris** will receive The Washington Chapter of the American Institute of Chemists' Honor Award for 1957 at the annual banquet April 23 at the Windsor Park Hotel.

**Jay S. Darling** has been appointed vice-president in charge of manufacturing of the Albert E. Sierad Co.

**Val C. Hoffman** has joined the Sales Organization of Roure-DuPont. Mr. Hoffman was for 12 years Consulting Chemist of Lucien Lelong. He will work with the Chicago Branch.

John E. McKeen

**John E. McKeen,** president and chairman of the board of Chas. Pfizer & Co., has accepted the Chairmanship of the Drug and Pharmaceutical Division of the National Fund for Medical Education.

**Beverly Stiansen,** vice-president in charge of sales for Mary Chess Inc., left for a trip through the Middle West to visit the Mary Chess accounts in Detroit, Chicago, Milwaukee, Kansas City, St. Louis, Indianapolis, Cincinnati, and Dayton, in company with Sophia Lunsford and Charles de Flandres.

**Pierre Rougny** retired January 1 after close to thirty years as Technical Director and Chief Perfumer of Houbigant. Mr. Rougny lives in Huntington, Long Island, where he enjoys gardening, reading and sailboating.

**Richard Salomon,** president of Charles of the Ritz and Alexandra de Markoff, left last month on an extended business trip to South America where he will visit the company's new manufacturing facilities with Louis B. Feeney, vice-president and general manager of the company's South American branches.

**L. J. Thompson** has been appointed vice-president in charge of sales by The Pharma-Craft Co.

**J. B. Whitney, Jr.** retired March 1 from his position as chief chemist for Luzier's Inc. after 28 years at that post. Mr. Whitney has no particular hobbies, but is looking forward to more time for traveling with Mrs. Whitney and visiting with the children and grandchildren.

**Adolph Dingfelder,** sales manager of Felton Chemical Co., left March 16 for a six weeks trip to Europe accompanied by Mrs. Dingfelder. The Felton sales executive will spend one week in the company's manufacturing branch in Versailles and visit with sales representatives in England, Belgium, Germany, Switzerland and Italy.

**Jack H. Mohr** has been appointed by Park & Tilford to head its Toiletries and Dyestuffs division. Formerly president of Lentheric, Mr. Mohr entered the toiletries field eleven years ago as assistant to the

Jack H. Mohr

president of Richard Hudnut. In 1952 he joined the Lentheric division of Olin Mathieson Chemical Corp. as vice president.

**Dr. Karl F. Folkers,** executive director of fundamental research at Merck Sharp and Dohme Research Laboratories, received the Julius W. Sturmer Memorial Citation and delivered the Sturmer Memorial Lecture at the Sixth Annual Rho Chi Citation Ceremony.

**Philip Berry,** purchasing agent of Ungerer & Co., has returned after three weeks in Florida where he had the opportunity to visit with the citrus oil industry of that state.

**Edouard L. Cournand,** president of Lanvin-Parfums, was seen recently on the Fourth Annual Arthritis Telethon. Mr. Cournand appeared as one of the Stars of Industry, a special feature of the 19-hour telethon which was telecast over Channel 5.

**James E. Henning** has been appointed vice-president of Bjorksten Research Laboratories for Industry.

**George H. Ammersbach** is now contacting the trade as a special service to customers whose perfuming problems can be best handled by on-the-spot consultation. As Fritzsche's chief perfumer for many years, Mr. Ammersbach's time has been in heavy demand since the inauguration of this service early this year. Recent trips have taken him to the West Coast, the Mid-West, and to numerous plants on the Eastern seaboard.

**Dr. D. E. Pletcher** has been advanced to the newly created position of staff manager of Fine Chemicals for the Dow Chemical Co. He has been the director of Aromatics Research since 1951.

Steffen Arctander

**Steffen Arctander,** internationally-known perfumer and chemist, has joined the Perfumery and Essential Oils Division of the Colgate-Palmolive Co. A regular contributor to the technical journals **American Perfumer** and **Soap, Perfumery & Cosmetics,** Mr. Arctander is also the author of scientific articles on his extensive botanical explorations of Africa.

**W. O. Bruell** of Polarome is currently touring in Europe, visiting all forms of the perfuming industry.

**Vernon K. Watson** has joined the Food Research Laboratories, Inc. as Senior Food Technologist. He will be stationed at the company's Eastern headquarters.

**Garret S. Meyer, Jr.** was recently appointed salesman to represent the newly purchased plant of the Warner-Jenkinson Manufacturing Co. Mr. Meyer will call on customers in Los Angeles and Arizona.

**Julius Abrahams** of the E. B. Evans Co. spent considerable time at the Canner's Convention in Chicago, studying the trend of the California Walnut Crop and Brine Cherry situation.

**Sidwell B. Thomas,** president of the National Fruit & Syrup Manufacturers Assn. has become associated with Balch Flavor Co. of Pittsburgh, in the capacity of National Sales Manager. Mr. Thomas is also active in the Dairy Industries Supplies Assn.

**Samuel H. Baer,** president and general manager of Blanke-Baer Extract & Preserving Co., has been making his annual visit to California, calling on customers as well as contacting fruit suppliers in the west.


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# Book Reviews

**FACHWORTER DER KOSMETIK, TIEL I/II, by Karl Bergwein. Gerhard R. Barsch Fachverlag, Hannover, Germany. 1956. 140 pages, size 8¼ x 5½ inches.**

This is a small book, defining various technical terms used in the cosmetic industry.

The first part is a dictionary of words and phrases while the second part deals with basic trade named materials.

The descriptions given are adequate. Numerous chemical materials, such as cholesterin, Royal gelée or isopropyl myristate are included.

The book is a good effort but needs considerable expansion to be truly useful.—*M. G. deNavarre.*

**AROMATES ET PARFUMS, CREATEURS DE JEUNESSE, by Marguerite Maury. Les Editions des Champs-Elysees, Paris, France. 1956. 134 pages, 7½ x 5½ inches. Price 500 francs.**

The author, a medical student from Vienna, member of the Faculty de Medecine de Paris has long studied the effect of aromatic materials on the human. The present book is a summary of the years of this study.

The author explains her ideas about odor and its effect on humans. This reviewer still prefers Jellinek's work in this regard although the present volume does not go into the esoteric aspects of odor to the extent done by Jellinek.—*M. G. deNavarre.*

**THE MOLDS AND MAN, by C. M. Christensen. University of Minnesota Press, Minneapolis, Minn. 244 pages, size 9 x 5¾, indexed. Price $4.00.**

This book is written in a somewhat popular vein, giving a general account of the fungi and how they affect man.

The chapter devoted to fungi that destroy commercial products is not all inclusive. Only grains, flour, dairy products, wood and products, paint, fabrics and protein goods. Drugs, cosmetics and foods are notable omissions.

It would be easier to follow the classification of the fungi if a chart were used to introduce the more complete description.

The material is interestingly presented. It is doubtful if it can be classed a text as is stated on the inside jacket cover. But it would be helpful reading to students of mycology.—*M. G. de Navarre.*


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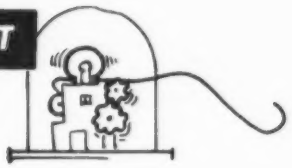
**MARKET REPORT**



# Flavoring Materials Lead Price Developments

## PRICE CHANGES

| Advances | Current | Previous |
|---|---|---|
| Vanillin, 1000 lb. lots | $2.85 | $2.75 |
| Ethyl vanillin, 500 lb. lots | 6.40 | 6.20 |
| Glycerin, Crude | | |
| Soap lye | 0.16 | 0.15 |
| Saponification | 0.1760 | 0.1660 |
| **Declines** | | |
| Peanut oil, ref. tanks | $0.18¼ | $0.19¼ |
| Oil lemongrass | 1.40 | 1.55 |
| Citronellol | 3.90 | 4.15 |
| Geraniol— | | |
| Extra | 3.40 | 3.60 |
| Soap grade | 2.15 | 2.25 |
| Geranyl acetate | 3.10 | 3.30 |
| Ionones, alpha | 5.10 | 5.25 |
| *Lemon oils, Calif.— | | |
| No. 410 | 4.00 | 5.00 |
| No. 413 | 3.75 | 4.75 |
| Oil citronella, Formosan | 1.10 | 1.35 |
| Oil geranium (palmarosa) | 6.50 | 6.75 |
| Copra, coast, ton | 148.00 | 150.00 |
| Palm oil, tanks | 0.13 | 0.13¼ |

* Exchange brands (Prices per pound unless otherwise specified)

Several flavoring materials took the lead in the way of price developments over the past month. The drastic price developments included advances in lignin vanillin and ethyl vanillin and reductions of a full dollar a pound in two grades of Exchange Brand Californian lemon oils. Formosan citronella oil and lemongrass lost some ground with the trend in both articles being attributed to greater selling pressure at primary markets.

### DEALER ALLOWANCE DROPPED—

In addition to increases in prices, one of the major producers of vanillin and ethyl vanillin announced that the new prices will apply to single shipments only and will apply to all future purchases with service allowance to dealers discontinued. Under the new plan, price advantage for service allowances will be obtained only through quantity purchases. The new 1,000 pound lot price for vanillin is $2.85 per pound in 100-pound containers, and for the same quantity in 25-pound containers, the price was moved up to $2.95. Previously, the price for vanillin had been $2.75 per pound in 100-pound containers for any quantity. The advance in ethyl vanillin covering quantities of 500-pounds or more, to less than 100-pound lots, establishes the market at $6.40 to $7.65 per pound.

### LEMON OIL COMPETITIVE—

Prices for Exchange Brand Californian lemon oils, numbers 410 and 413 were slashed $1 per pound as the result of competitive conditions in the market. The number 410 oil was reduced to $4 per pound from $5 and number 413 to $3.75 per pound from $4.75. Some independent brands of lemon oil had previously been selling well below the prices previously existing on Exchange Brands.

### OIL CITRONELLA DECLINES—

The downward trend in Formosan citronella oil grew more pronounced over the past month, following a somewhat irregular tone. Local prices were rather slow in reflecting the downward trend at the primary center. Dealers and importers had been following a cautious policy when making replacement purchases for some time in anticipation of a more pronounced break in the market. Prices for Ceylon citronella slipped off slightly but a heavier seasonal demand for the article may tend to dampen the possibility of any drastic decline in values.

### GLYCERIN IRREGULAR—

The glycerin market displayed an irregular trend. Prices on crude rose a full cent a pound with sales of soap lye being noted on the basis of 16 cents per pound. Refined material displayed a heavy tone, however, with March sales proving rather disappointing in the face of continued good stocks. Total stocks remained at approximately 67 million pounds. On the basis of the statistical position, refined prices might be expected to decline. Thus far however major producers have been reluctant to lower quotations since such a move, it is pointed out, would hardly induce any greater demand.

### MENTHOL FIRMS—

Prices for synthetic laevo menthol were advanced 50 cents per pound despite a falling market in Formosan citronella oil. The advance in prices for synthetic material can in some measure be traced to a generally firmer situation developing in the natural product in the world market. The high price of Chinese menthol on the Continent is said to have stimulated the demand for material in Brazil while the natural product from Japan has remained very high in price with very few offerings coming out of that country. Prices on synthetic racemic menthol have remained steady.

### BEESWAX QUIET—

Trade in beeswax has been rather quiet as most buyers have been waiting to see if the softer trend in the unbleachable grades from Africa will eventually influence the bleachable grades from South America. Toward the close of the period shipping prices from both Chile and Brazil were tending upward.

### CALIFORNIAN ORANGE TIGHTENS—

The supply position in Exchange Brand Californian orange oil has tightened considerably with allocations to some distributors having been further reduced. The tightness has served to be reflected in improved sales of independent brands as well as the Floridian oil.

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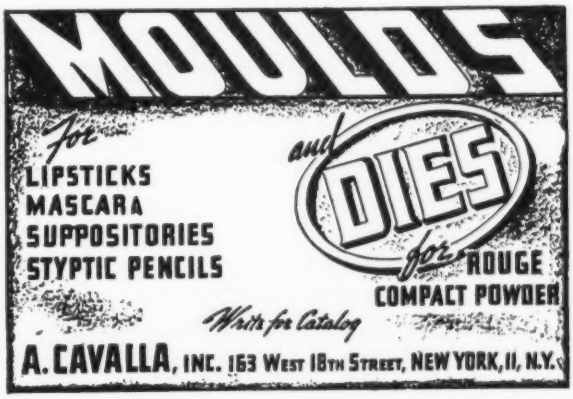

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